

COMPILATION OF EXPERT PAPERS CONCERNING

Liability and Redress and Living Modified Organisms

A contribution to the Article 27 process
under the Cartagena Protocol on Biosafety

February 2004

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February 2004

Dear Delegate

The topic of liability and redress is an important part of the discussions underway in connection with the entry into force and implementation of the Cartagena Protocol on Biosafety (the Protocol). CropLife International is the global federation representing the plant science industry. It supports a worldwide network of regional and national associations in 87 countries. It is led by companies such as BASF, Bayer CropScience, Dow AgroSciences, DuPont, FMC, Monsanto, Sumitomo and Syngenta, which continually reinvest in agricultural research and development. As such, it has a keen interest in the topic of liability and redress.

Article 27 of the Protocol requires that the Parties, at their first meeting:

‘adopt a process with respect to the appropriate elaboration of international rules and procedures in the field of liability and redress for damage resulting from transboundary movements of living modified organisms, analysing and taking due account of the ongoing processes in international law on these matters, and shall endeavour to complete this process within four years.’

In order to make a positive contribution to the Article 27 process, CropLife International commissioned the preparation of independent papers by legal experts with substantial experience, at both the national and international levels, in the fields of liability and redress, regulation of biotechnology, and environmental law. The content of the papers shared in this publication is wholly the opinion and responsibility of the authors; CropLife International does not necessarily endorse or agree with any of the assertions, analysis or conclusions presented in these papers.

The authors were asked to address the following questions:

- What is the experience to date with the negotiation of international liability instruments in the environmental field and what are the lessons learned of relevance to the Article 27 process?

Dr. Katharina Kummer Peiry, a Swiss lawyer specializing in international environmental law and policy, explored this question based on her direct experience with the negotiation of international environmental instruments, including in her role as Chair of the Committee of the Whole of the UNEP Working Group that elaborated the Basel Protocol on Liability.

- How do existing civil systems address traditional damage that may be caused by the transboundary movement of LMOs?

Professor Lucas Bergkamp, a leading European practitioner, lecturer and author on the topic of international environmental liability law, has analysed this important question based on his extensive experience with, and analysis of, the topic over many years.

- How has the issue of liability and redress for damage to biodiversity been addressed to date and what are the best approaches and practices?

Laura van der Meer has examined the various approaches to liability for environmental harm at the international and national levels, based on her experience as an environmental lawyer practicing in the United States and Europe, and has provided case study examples of how some countries have addressed this issue.

- What analysis should be done at the national level when countries consider the issue of liability and redress in connection with LMOs?

Rachel G. Lattimore, a U.S. lawyer focused on animal- and plant-based biotechnology regulation and legal challenges, identified a series of questions that can assist countries to analyse effectively their existing national situations with respect to liability and redress as a critical basis for governmental decision-making on this topic.

- What would be the implications for countries if they were to adopt the liability provisions proposed in the Third World Network (TWN) and Organisation of African Unity (OAU) Model Laws at the national level?

Stanley H. Abramson has analysed the TWN and OAU liability provisions based on their combined experience with international and national environmental regulation and compliance and legal challenges before courts and administrative agencies.

- How would the scenarios presented at the Rome experts' meeting be handled under existing laws and regimes at the national or international levels?

Prof. Bergkamp has evaluated selected hypothetical situations discussed in Rome in terms of state responsibility as well as civil liability. In addressing civil liability, he considered liability and redress both for traditional damages as well as damage to the environment.

To ensure the independence of the papers, CropLife International proposed, and the experts agreed, to prepare the commissioned papers without consultation with CropLife International or any other organisation, association or company. However, in an effort to challenge their own thinking and conclusions, the authors engaged in a peer-review process through which they each reviewed the others' papers and offered comments, criticisms and suggestions. Individual authors remained free to accept or reject suggestions offered by their peers.

At the conclusion of their peer review process, the authors presented CropLife International with the final papers, which were included in this publication without editing or alteration of any kind.

We hope that you find these papers useful in considering the issue of liability and redress at the national level as well as in connection with the Article 27 process. We invite you to contact CropLife International if you have any questions about this publication.

Yours sincerely

A handwritten signature in black ink, appearing to read 'C. Verschueren', with a large, sweeping initial 'C'.

Christian Verschueren
Director General

Glossary of Terms

Note: This informal glossary was developed by the authors who contributed to this Compilation in an effort to ensure consistency in usage and understanding of basic terminology related to liability and redress. It is intended as a tool to assist non-lawyers in reading this Compilation, but is necessarily limited and does not replace more comprehensive explanations of the relevant terms. It explains the terms used in this Compilation in the specific context of the process under the Biosafety Protocol regarding liability and redress regimes.

BASIC TERMS

Liability is an obligation of a person (as defined below) under the applicable law to provide compensation for damage resulting from an action for which that person is deemed to be responsible.

When does liability arise?

1. There is damage recognized by the applicable law; AND
2. Responsibility for that damage is attributed to a person because
 - (a) The damage has been caused by an act or omission of the person through fault or negligence (see fault based liability below); OR
 - (b) The damage is the result of an ultra-hazardous activity carried out by the person (see strict liability); OR
 - (c) The person agreed to a duty to compensate through a contractual obligation.

Damage is the harm for which liability is imposed. It is defined in legal instruments in various ways, depending on the type of legal system and purpose of the instrument. The precise definition of damage is critical to establish for *what types of harm* a person may be held liable; certain types of harm (e.g. the sentimental value of a damaged good to the specific plaintiff) are not recognized by the law as “damage.” The definition of damage generally includes a threshold (e.g., “significant damage”) which triggers applicability of the liability system.

- **Biodiversity damage** has yet to be precisely defined at the international level but can be described as a subset of the broader term “environmental damage.” Biodiversity damage is distinct from and should not be confused with traditional damage.

- **Traditional damage** means personal injury; loss or harm of property, and harm to economic interests, including loss of profits or impairment of income. It is sometimes also referred to as “conventional” or “private” damage.

Redress is a remedy or relief which the person who is liable for harm must provide to the person who has suffered the harm. The remedy can consist in “undoing” the harm (restoration) if this is possible, or in monetary compensation.

Plaintiff is the person filing the legal action (a “claim” or a “case”). The term “claimant” is also used .

Defendant is the person against whom a legal action is brought.

- **Person** is usually defined in legal systems to refer to natural or juridical persons. This means that it includes individuals, organizations, companies, corporations, etc.

TYPES OF LIABILITY

State liability means holding a country responsible for damage to another country under the applicable rules of international law. It is also referred to as “state responsibility.”

Civil liability means liability (as defined above), of a person under civil law, i.e. the law governing relations between one private party and another private party. It is also referred to as “private liability”.

General environmental liability is liability that attaches not to a specific activity that is potentially hazardous to the environment, but to each activity that is found to have resulted in damage to the environment, without distinguishing between specific types of activities. Under this approach, any actual damage to the environment may be covered, regardless of which activity has caused it.

Product liability is liability placed on the producer, brander, distributor, importer, retailer or other supplier of products for personal injury or property damage (traditional damage) resulting from the use of the product.

Administrative law is the body of law that governs relations between the state or government and private parties, including the rules that define and limit the state’s authority.

STANDARDS OF LIABILITY

Fault-based liability is the attribution of liability because a person is at fault, i.e. acts in contravention of a duty of care imposed by the law (in the form of a statutory or regulatory rule or a customary rule).

When does fault-based liability arise?

1. The person has a duty of care; AND
2. The person breaches that duty either by an intentional act, or through negligence; AND
3. Actual damage recognized by the applicable law has occurred; AND
4. There is a causal link (causation) between the act or omission and the resulting damage.

- **Duty of care** refers to a legal obligation placed on a person in a position of control of relevant activities (either actual control or control as a result of rights under the law, e.g. ownership) to use their best or reasonable efforts to prevent damage.
- **Causation** refers to a legal requirement to demonstrate that an act or omission is linked to the damage in the manner required by the applicable law. It is sometimes referred to as the “causal link.” A distinction is made between cause-in-fact and cause-in-law. Cause-in-fact is a necessary but insufficient prerequisite to finding cause-in-law; cause-in-law involves an analysis of causes-of-fact to determine which ones are relevant under the applicable law.
- **Negligence** means the failure to meet a duty of care.

Strict liability is the attribution of liability without the requirement of fault (also known as “no-fault” liability). This type of liability is selective, and applies only in certain cases, e.g., for hazardous activities such as marine transport of oil. Defences and limits (in time and monetary) are common components of a strict liability system.

Absolute liability is the attribution of liability without a requirement of fault and without the availability of any defences. This type of liability is extremely rare.

REDRESS

Injunction refers to a legal mandate to act or refrain from acting.

Restoration means re-establishing the situation as it was before the harm was caused (“undoing the harm”). It is one of the possible types of redress to be provided by a liable person to the person who suffered the harm. However, depending on the type of harm, restoration will not always be possible.

Compensation is provision of the monetary value of the harm. In some legal systems, compensation is due if restoration is not possible. The court generally determines the value of the goods or rights that have been infringed, on the basis of their market value, and thus the amount of compensation to be paid.

OTHER IMPORTANT TERMS

Arbitration is a means to resolve a conflict which can be used as an alternative to action before a court. Under an arbitration procedure, a small number of specialized arbitrators are appointed by the parties to a given conflict. The arbitrators rule on the issue under dispute, and the parties agree to be bound by that ruling.

What role can arbitration play in obtaining redress?

Claims for traditional damage alleged to have been caused by LMOs can be addressed through awards granted by arbitration institutions, which exist both at the national and international levels. Arbitration mechanisms are available to the parties to a dispute to obtain an effective and efficient resolution of their dispute. Parties often prefer these mechanisms to court action as they tend to be cheaper and more flexible, and specialized arbitrators may be more knowledgeable on the issues than all-round judges.

Mediation is an informal means of settling a dispute or resolving a conflict through a neutral actor who facilitates the negotiations between the parties to the dispute.

Standing describes the rules concerning who has the legal right to file a legal claim or case.

Limitations period refers to the time allowed for a claim to be brought.

Liability ceilings are maximum financial limits placed on the amount a person can be required to pay in relation to any claim or claims in a given period, or any event. Liability ceilings provide predictability in the legal system, which helps to avoid that the liability system discourages innovation and development, and are important for insurability.

Procedural law refers to the rules that govern the legal process, including such matters such as who may bring a claim, when and how a claim must be brought and presented, and what evidence is allowed.

Substantive law refers to the set of legal rules, laws, prior judgments, etc. that govern the merits (non-procedural aspects) of a claim.

Costs or administrative costs refer to the costs associated with the filing and handling of a claim or case in an administrative or court system. Either a Plaintiff or a Defendant may be ordered to pay the court costs. In many systems, courts also may order that the Plaintiff pay the Defendant for the costs of defending against the legal claim. This happens when the claim lacks a reasonable legal basis ("frivolous" claims) or was filed with the purpose of harassing the Defendant.

International Civil Liability for Environmental Damage: Lessons Learned

Katharina Kummer Peiry

Article 27 of the Cartagena Protocol requests Parties to analyze and take into account other international processes on liability when addressing the issue in relation to LMOs. International civil liability regimes for damage relevant to the environment are operational in the fields of nuclear materials and oil pollution from ships, dating from the 1960s and 1970s. In the past two decades, a number of additional civil liability regimes were adopted both at the global and at the European levels, mostly addressing damage caused by potentially hazardous substances. However, none of these has as yet entered into force, as they have not received a sufficient number of ratifications. Most are beginning to be considered “dead letter”. This paper looks at possible causes, and attempts to set out lessons to be learned from these experiences that could be relevant for the Biosafety Protocol discussions on this issue.

1. The Basel Protocol on Liability and Compensation: A Case in Point

At its adoption in December 1999, the Protocol on liability and compensation to the Basel Convention on hazardous wastes was hailed as a crucial achievement in addressing civil liability for environmental damage at the international level. It was the first civil liability protocol ever concluded in the framework of a global environmental treaty. As such, it was considered important not only on its own merits, but also as a potential model for liability negotiations under other environmental treaties. During the 1990s, there was a tendency to look to the liability negotiations under the Basel Convention when considering equivalent negotiations under other environmental treaties. The supporters of launching liability negotiations quoted the Basel Convention as a positive precedent, while the detractors claimed that it was not worth investing in liability negotiations as long as it was unclear whether the Basel negotiations would ever yield results.

The negotiations did yield results. However, the Basel Protocol, which had raised high hopes at the time of its adoption, may now be destined to join the ranks of its predecessors: four years after its adoption, it has been signed only by 13 of the Convention's 158 Parties. Of these, only three are developing countries. Only one country, Ethiopia, has acceded to the Protocol¹.

Key provisions of the Basel Protocol

The Basel Protocol establishes the following essential rules and principles regarding civil liability for damage resulting from transboundary movements of hazardous wastes:

- Coverage of traditional damage² as well as environmental damage³ occurring during a transboundary movement of hazardous wastes (Article 2):
 - Traditional damage includes loss of life, personal injury, loss or damage to property, and loss of income directly deriving from an economic interest in the environment
 - Environmental damage includes the costs of reinstating the environment and of preventive measures. Damage that cannot be assessed in monetary terms (“purely environmental” damage affecting the intrinsic value of the environment) is not covered⁴.
- Coverage of damage that occurred during transboundary movement, i.e. from the point of departure to the point of arrival (Article 3).
- Strict liability (i.e. liability regardless of whether or not the person is at fault) to be applied to the responsible operator; determination of the person responsible at any given moment (Article 4)

¹ Status as of December 2003. List of signatories published on www.basel.int.

² For discussion of this concept, see related article, L. Berkamp “Liability and Redress: Existing Legal Solutions for Traditional Damage”.

³ For discussion of this concept, see related article, L. van der Meer “Environmental Liability Regimes: Approaches and Best Practices”.

⁴ For a discussion of the types of damage in the context of the ECE Protocol on Liability for damage to international waterways (the relevant provision of which has been adapted from that of the Basel Protocol), see A. Antypas and S. Stec, Towards a liability regime for damages to transboundary waters by industrial accidents, in ELM 15(2003)5, p. 295 et seq.

- Fault-based liability (i.e. liability only where the person is at fault) to be applied to persons other than the responsible operator who caused or contributed to damage by illegal, negligent or reckless acts (Article 5)
- Obligation of the person in operational control at the time of the incident (who may or may not be the responsible operator) to take mitigating measures (Article 6)
- Right of recourse of the liable person (Article 8)
- Financial limits and time limits for bringing a claim (Articles 12 and 13)
- Obligation of potentially liable persons to establish insurance, bonds or other financial guarantees (Article 14)
- Procedural provisions (Article 17 et seq.)

Slow and difficult negotiations

The Basel Protocol on liability took nearly ten years to negotiate¹. Its “parent” treaty, the Basel Convention, was adopted in 1989. There had been considerable pressure for including liability provisions into the text of the Convention. This concept was finally abandoned mainly due to lack of time, and due to opposition by an important faction of the negotiating states. The same approach was chosen as in the Biosafety Protocol negotiations: an enabling provision was included, requesting Parties to consider the issue further. At the time, this was heavily criticized, with some actors maintaining that the absence of substantive liability provisions rendered the Convention meaningless. Pressure from developing countries and NGOs kept the issue on the agenda, and work on a protocol on civil liability started soon after the adoption of the Convention. Based on a draft prepared by the interim secretariat and an experts’ working group, the first Conference of the Parties in 1992 established a second working group with the mandate of elaborating the protocol. The initial aim, set by the Conference in 1994, was to finalize the protocol by 1995, but this soon proved unrealistic.

The second working group on liability and compensation held 10 meetings between 1993 and 1999. Mainly because of fundamental controversies over key issues, the negotiations were difficult, and progressed very slowly. Due to financial constraints, the negotiating group normally met only once a year. Real progress was not achieved until June 1998, after nearly 8 years of negotiations. The Basel Protocol was finally adopted by the 5th meeting of the Conference of the Parties in December 1999.

¹ For an overview and analysis of the negotiation process, see inter alia K. Kummer, *International Management of Hazardous Wastes*, Oxford 1995/1999, pp. xlii, 72, 243 et seq.

The contentious issues

The following issues were among the most contentious, and were resolved only at the end of the negotiation process¹:

- Scope of application: Even though there was agreement that the protocol should apply only to damage occurring during transboundary movement of hazardous wastes, there was considerable debate over the starting and the ending point of applicability, and over applicability in relations with non-Party transit states. On the first point, a compromise was reached to cover damage from the starting point to the end point of the transboundary movement, but allowing a Party to unilaterally exclude the part of the movement taking place in its territory. On the second point, transit countries were given certain rights in the Prior Informed Consent procedure (the equivalent of Advanced Informed Agreement in the Biosafety Protocol).
- Channeling of liability: there was a diversity of proposals as to which person should be primarily liable. The main options remaining at the end were (1) the person in operational control of the wastes at the time of the incident, and (2) the notifier or exporter. A compromise was eventually found to use a combination of the two approaches.
- Financial limits of liability: There was disagreement as to whether a financial “ceiling” should be introduced, and if so, how this should be determined. Developing countries in particular considered a financial limit to be acceptable only if a compensation fund were established. A “ceiling” was eventually included, but the details were only finalized two years after the adoption of the Protocol, through amendment of the relevant Annex.
- Insurance and other financial guarantee: The main controversies included the issue of requiring a minimum coverage for compulsory insurance, and the question whether legal action can be brought against the insurer. Both these questions were ultimately answered in the affirmative.
- Establishment of a fund to provide compensation in cases where this is not available under the protocol (so-called second-tier liability): This was the major dividing issue and nearly led to the break-up of the negotiations during the last session prior to adoption. Developing

¹ Cf. the reports of the Working Group meetings, available at www.basel.int; also P. Lawrence, Negotiation of a Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal, in RECIEL 7/3 (1998), p. 249 et seq.

countries saw it as an essential element of the future protocol, whereas developed countries were strongly opposed to the concept. As a compromise, the protocol contains an enabling provision mandating the Conference of Parties to keep the issue under review.

2. Other international agreements on civil liability relevant to the environment¹

As noted above, there are operational civil liability regimes for two subject areas relevant to the environment: nuclear damage, and damage caused by oil spills from ships. Both have been in force for many years. The first consists of a number of interrelated treaties adopted between 1960 and 1988, and further developed through several amendments in the 1990s. The main components of the second are the Oil Pollution Convention of 1969 and the Fund Convention of 1971, both further developed through amendments and new protocols in the 1990s and 2000s. Under the Fund Convention, a compensation fund of the type discussed in the Basel negotiations is operating. It is interesting to note that prior to the adoption of this regime, the shipping industry had established its own compensation schemes to cover damage resulting from oil spills.

A new generation of civil liability regimes relevant to the environment emerged in the late 1980s and the 1990s. Like the Basel Convention, these treaties took years to negotiate. The most elaborate is the Lugano Convention on Civil Liability for Damage resulting from Activities Dangerous to the Environment, adopted under the auspices of the Council of Europe in 1993. It covers a wide range of activities defined as dangerous, and applies to damage regardless of whether or not there is a transboundary dimension. Two treaties address liability for damage resulting from transport of dangerous goods: the 1989 Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD), negotiated under the auspices of the UN Economic Commission for Europe (UN/ECE), and the global 1996 International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea, negotiated under the auspices of the International Maritime Organization. As noted above, none of these is in force today, and it appears increasingly unlikely that they will ever become operational.

¹ For an overview see K. Kummer, *ibid.*, p. 238 et seq.; Document UNEP/CBD/ICCP/2/3 (31 July 2001): Liability and Redress for Damage Resulting from the Transboundary Movements of Living Modified Organisms – Review of existing relevant instruments and identification of elements.

The latest addition to international civil liability legislation addressing environmental damage is the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, adopted under the auspices of the UN/ECE in Kiev in May 2003. This is a Protocol to two UN/ECE Conventions that address transboundary effects of industrial accidents and protection of transboundary watercourses, respectively. Contrary to previous liability negotiations, the insurance industry was given an active role, and helped to find realistic solutions particularly on the issues related to financial guarantee¹. There seems to be some hope that this regime might be more viable than its predecessors. On adoption, the Protocol was signed by 22 countries of the UN/ECE region², which seems a reasonably good start. It remains to be seen whether ratifications will follow.

All of these regimes establish essentially the same rules and principles as the Basel Protocol. In general, they establish a regime of strict liability, and channel liability to one clearly identifiable actor. The definition of damage is similar to that of the Basel Protocol. Most regimes provide for financial limits and time limits for bringing a claim, as well as a minimum level of compulsory insurance or other financial guarantee. Finally, they provide for unified procedures, equal access to courts for nationals of other party states, and mutual recognition of court decisions.

3. Country surveys: What prevents states from adhering to international regimes on civil liability for environmental damage?

With few exceptions, the record of international civil liability regimes for environmental damage to date is poor in terms of entry into force and implementation. This has given rise to some soul-searching by the international organizations under the auspices of which the regimes were negotiated. Surveys were undertaken to identify the reasons for member states' failure to adhere to the respective treaties. Results of such surveys are available for the 1989 CRTD Convention³, the 1993 Lugano Convention⁴, and the 1999 Basel Protocol¹. In all the surveys, the following

¹ See A. Antypas and S. Stec, *ibid.*

² The UN/ECE Region covers Eastern Europe including the Central Asian Republics, Western Europe, and North America.

³ Cf. UN/ECE Documents TRANS/WP.15/2001/17 and Add.1-8 (February 2001): Follow-up to the Convention on Civil Liability for Damage caused during Carriage of Dangerous Goods by Road, Rail and Inland Navigation Vessels (CRTD) – Note by the Secretariat, available at www.unece.org

⁴ Cf. UN/ECE Documents MP.WAT/2001/1 (26 March 2001), 2001/2 (1 May 2001), and 2001/2/Add.1 (18 June 2001): Responsibility and Liability in Relation to Accidental Water Pollution, available at www.unece.org.

obstacles to becoming Parties to these treaties were identified by participating states:

- Heavy financial burden imposed by high financial limits of liability and high thresholds for compulsory insurance, especially on small and medium enterprises; resulting increase in the price of the goods concerned
- Difficulty of obtaining insurance coverage under the provisions of the civil liability treaty
- Discrepancy between the international treaty and national civil liability legislation, making it impossible for states to adhere to the treaty without substantive revision of their national legislation. Examples where national laws of the participating countries differ from the international regimes include the scope of the damage covered (e.g. inclusion of environmental damage); the definition of dangerous activities and hence the scope of activities covered; time limits for bringing a claim, the requirement and financial threshold of compulsory insurance, and financial limits of liability.
- Failure of the treaty to attract support from a minimum number of states; i.e. a state does not want to accept the obligations of the treaty unless a minimum number of other states do likewise, for fear of suffering trade disadvantages

4. Lessons to be learned

What are the obstacles to ratification and entry into force of civil liability regimes?

In this author's view, a number of factors contribute to the difficulties encountered in the negotiation, as well as in ratification and entry into force, of international civil liability regimes. Some of these have also been identified in the country surveys.

- It would appear that a specific liability regime for a subject area where there is a multitude of operators, activities and substances is complex and therefore difficult to negotiate and equally difficult to implement.

(Footnote cont'd from previous page.)

¹ CF. Document UNEP/CHW/OEWG/2/3 (6 August 2003): Basel Protocol on Liability and Compensation – Note by the Secretariat, available at www.basel.int

This may in part explain the relative success of the regimes on civil liability for oil pollution and for radioactive substances, compared to the regimes on hazardous substances and “activities dangerous to the environment”: the former apply to one substance and a generally limited number of activities and operators, while the latter apply to a large number of substances and to a relatively wide range of activities and operators¹.

- In establishing unified financial limits and thresholds for insurance, it is not possible to take the different financial situations in different countries sufficiently into account. What may be an acceptable financial burden in one country is considered excessive in another. In the context of the European conventions, it is interesting to note that the issue of the heavy financial burden was most often raised by Eastern European countries with economies in transition.
- In some cases, the negotiating process did not provide sufficient involvement and consultation of the industry sectors concerned, in particular the insurance sector. Accordingly, the practical aspects of future implementation were not sufficiently taken into consideration. The 1989 CRTD, for example, was not negotiated by the members of UN/ECE with observer participation, but prepared by the International Institute for the Unification of Private Law (UNIDROIT), a specialist body. In the case of the UN/ECE Liability Protocol, this flaw was avoided by including representatives of industry, in particular the insurance sector, as active partners in the negotiations. Arguably, one reason for the relative success of the international civil liability regime for oil pollution damage is that it built on an existing industry scheme and had the support of the industry sector concerned.
- The complexity of the issue of civil liability, and the fundamental differences between the many different domestic systems, make it very difficult for an international civil liability regime to accommodate the particularities of each country’s national legislation, as the list of obstacles appearing in the various country surveys shows. The resulting discrepancies will make it difficult for a country to adhere to the international regime. A related problem is that some countries have broad liability legislation applicable to a range of activities, rather than special provisions for each activity, and are not in a position to adapt their entire liability regime to the international rules for a single type of activity.

¹ For a similar observation see P. Lawrence, *ibid.*, p. 254; IMO Document LEG 87/11/1 (8 August 2003): Monitoring the Implementation of the HNS Convention - Papers discussed at the Special Consultative meeting of the HNS Correspondence Group in Ottawa, 3-5 June 2003.

- The precedents show that many states are generally very reluctant to subscribe to international civil liability regimes, in particular those states that have an elaborate national civil liability regime in place and are reluctant to make fundamental changes to it¹. Attempts to reconcile the different national systems make the negotiations difficult and contentious, and they often turn out to be very lengthy and costly exercises.
- By contrast, countries that do not have any national civil liability legislation to cover environmental damage tend to push for an international civil liability regime, in the hopes that this will fill the gap. This does not take into account the fact that an international civil liability regime serves to unify national provisions on certain issues, and is thus a supplement to, not a substitute for, national legislation. International civil liability regimes address a number of key issues, leaving other issues to be addressed by national legislation². Thus a country that has nothing in place will find it difficult to make full use of an international regime.

In addition to these factors that can generally be identified for the existing civil liability treaties relevant to the environment, there is a specific constraint for a future liability regime in the framework of the Cartagena Protocol. Management of LMOs is not in the same category as the activities addressed by existing regimes - oil pollution, management of radioactive substances, and transport of hazardous chemicals -, which are recognized as being potentially hazardous. In these cases, the damage is generally known and can be marked with figures, and a causal link to the relevant activity can be established. By contrast, it has not as yet been scientifically established what damage, if any, is caused by LMOs.

What are the potential success factors for a liability regime?

It would appear that international civil liability regimes as an instrument to address environmental damage have the best chance of becoming operational if the following requirements are met:

- Known and clearly identifiable risks and damages
- Limited number of operators, activities and substances

¹ See also S.D. Murphy, Evaluation of an International Liability Regime for the WHO Framework Convention on Tobacco Control (paper elaborated for the WHO Secretariat, February 2001).

² See e.g. Article 19 of the Basel Protocol: " All matters of substance or procedure regarding claims before the competent court which are not specifically regulated in the Protocol shall be governed by the law of that court (...)"

- Support of the industry sectors concerned, involvement from the start of the negotiations (including the insurance sector)
- Existing national civil liability regimes of the participating countries; ideally featuring sufficiently similar provisions that the unifying rules of an international regime can be applied without fundamental changes

Even if these conditions are met, the negotiation of an international civil liability regime can be very time consuming and costly, and there is the danger that it will never enter into force, as the precedents show. In the area of management of LMOs, where at least the first two requirements are not met, this danger is even greater. A novel avenue to addressing some of the problems identified might be the elaboration of an international regime that is limited to addressing the unification of procedures, access to foreign courts, and mutual recognition of judgments, without establishing substantive rules. If this option were chosen, considerable effort would at the same time need be put into developing the national civil liability legislation of future parties to the Cartagena Protocol to allow them to address the issues in a way that is adjusted to their particular situation with regard to LMOs, and in line with their existing legal system.

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Liability and Redress: Existing Legal Solutions for Traditional Damage

PROF. LUCAS BERGKAMP

The Parties to the Cartagena Protocol on Biosafety (BSP) are considering the issue of liability and compensation for damage resulting from transboundary movement of living modified organisms (LMOs). The concerns of some proponents of a BSP liability instrument relate not only to potential damage to biodiversity, but also to perceived risks of LMOs causing personal injury or health damage, and property or other economic damage (hereafter referred to as “traditional damage”).

In this author’s view, given the objectives of the Convention on Biological Diversity and the BSP, such damage is not covered by the BSP.¹ Nevertheless, concerns about traditional damage have been raised in connection with the Article 27 process. This paper therefore discusses how concerns relating to traditional damage already are handled by existing liability mechanisms and regimes. Part 1 discusses existing international institutions and mechanisms to resolve claims through arbitration. Part 2 discusses the availability of national courts and the operation of private international law to ensure the availability of courts in a cross-border context. Part 3 reviews the applicable substantive law of national liability systems. Part 4 describes the selection of applicable substantive law in the cross-border context.

¹ For more detailed discussion, see related article, L. Bergkamp “Analysis of the Applicability of Existing Civil Law to the Rome Scenarios,” Part V.

1. Multiple Mechanisms Exist for Arbitration and Enforcement of Awards

Claims for traditional damage alleged to have been caused by LMOs can be addressed through awards granted by international arbitration institutions, which, as detailed in footnote 2 below, exist throughout the world. Arbitration mechanisms are available to the parties to a dispute to obtain an effective and efficient resolution of their dispute. These mechanisms are alternatives to actions before courts, and are often preferred by the parties as they tend to be cheaper and more flexible and specialized arbitrators may be more knowledgeable on the issues than all-round judges.

The Convention on Biological Diversity (CBD), the parent convention to the BSP, makes arbitration available to the Parties to the Convention¹ through the procedure set forth in Article 27. When ratifying the CBD, Parties may choose that disputes, if negotiations and mediation are unsuccessful, be settled through an arbitration procedure set forth in Annex II to the CBD. These procedures apply also to claims under the BSP.² Arbitration can be the exclusive means of settling disputes, or an optional means in addition to proceedings before the International Court of Justice.³ Arbitration can be an efficient means of resolving claims between states. As only states have a right of action in such proceedings, private claimants have to persuade their governments to file for arbitration. This provides an additional filter and allows governments to sort colorable claims from weak or frivolous claims. Like international arbitration institutions, national arbitration institutions are able to provide effective remedies in respect of traditional damage allegedly caused by LMOs. Such institutions exist in a large number of countries throughout the world.⁴

Pursuant to the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, June 10, 1958), awards issued by arbitration bodies, subject to very limited exceptions, can be enforced easily in the courts of countries that have ratified the convention.⁵

¹ The Parties to the Convention are the states that have ratified the Convention.

² Many international conventions provide for arbitration. However, states often do not take full advantage of these procedures. This is a general issue that should be analyzed and better understood so that the effectiveness of international arbitration procedures can be improved.

³ Cf. UNEP/CBD/BS/COP-MOP/1/9/Add.1 Part H).

⁴ There are many arbitration bodies operating at the international and national levels. In the US, where many biotechnologies reside, the American Arbitration Association, among many other organizations, provides international arbitration services. See <http://www.adr.org/index2.1.jsp>. In Europe, international arbitration is handled by many bodies, including the International Chamber of Commerce in Paris. See http://www.iccwbo.org/index_court.asp. In South America, the Interamerican Arbitration Commission links most South and Central American arbitration centres. See <http://www.ciac-ciac.org/quienes.html>.

⁵ The New York Convention has been ratified by Albania, Algeria, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Benin, Bolivia,

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Through these institutions and mechanisms, claimants are able to obtain redress.

2. National Legislation and International Private Law Allow for Resolution of Claims in National Courts

In addition to international and national arbitration bodies, claims for alleged damage from LMOs also may be brought before the national courts of the jurisdictions in which defendants and claimants reside. In the plausible scenario that both the claimant and defendant reside in one country, as in the case of claims brought against importers, national courts would often be the most appropriate and most efficient and effective way to adjudicate the claims.

Where the claimant is based in one jurisdiction and the defendant in another, however, the first question is in which courts can claims be brought? Principles of international private law (which is national law applying to cross-border disputes and other relations between private parties) will designate the court or courts having jurisdiction over the dispute. International private law thus operates to ensure that claims recognized under national liability regimes also can be exercised in a cross-border context.¹ In addition, national jurisdictional and standing rules, including the rules of the US, where many biotechnology companies are based, generally allow foreign claimants to sue in their court system.

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Bosnia and Herzegovina, Botswana, Cambodia, Brazil, Brunei, Darussalam, Bulgaria, Burkina Faso, Cameroon, Canada, Central African, Republic, Chile, China, Colombia, Costa Rica, Côte d' Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Djibouti, Dominica, Dominican Republic, Georgia, Ecuador, Egypt, El Salvador, Estonia, Finland, France, Germany, Ghana, Greece, Guatemala, Guinea, Haiti, Holy See, Honduras, Hungary, Iceland, India, Indonesia, Iran (Islamic Rep. of), Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lebanon, Mali, Lesotho, Lithuania, Luxembourg, Madagascar, Malaysia, Malta, Mauritania, Mauritius, Netherlands, Mexico, Monaco, Mongolia, Morocco, Mozambique, Nepal, New Zealand, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Saint Vincent and the Grenadines, San Marino, Saudi Arabia, Senegal, Serbia and Montenegro, Singapore, Slovakia, Switzerland, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Syrian Arab Republic, Thailand, The former Yugoslav Republic of Macedonia, Ukraine, Trinidad and Tobago, Tunisia, Turkey, Uganda, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America, Uruguay, Uzbekistan, Venezuela, Vietnam, Zambia, and Zimbabwe.

¹ International private law, Strikwerda explains, is aimed at regulating the problems that result from differences in legal systems and transboundary disputes. Strikwerda L. *Inleiding tot het Nederlandse Internationaal Privaatrecht*. Fifth Edition. Groningen: Wolters-Noordhoff, 1997, p. 20.

Judicial jurisdiction involving parties from two or more countries often turns on the residence of the parties.¹ Courts that may have jurisdiction under the rules of an applicable international private law typically include (1) the courts of the claimant's residence (*forum actoris*), (2) the courts of the defendant's residence (*forum rei*), (3) the courts of another country, such as the place where the relevant act was done or damage occurred, or where the relevant good, e.g. real estate, is located (*forum rei sitae*), and (4) the court agreed by the parties. While the *forum actoris* rule is not widely applied, the *forum rei* rule is internationally generally accepted.² In other words, under international private law, a claimant, if he cannot sue before the courts of his own country, can generally avail himself of the courts of the place where the defendant resides. This rule applies irrespective of the nationality of the claimant. Thus, generally, international private law generally accommodates foreign claimants on the same footing as domestic claimants. This is also true in the US, where many biotechnology companies are incorporated.³

3. Existing Substantive Law in National Systems Would Govern Most Disputes

Given the availability of national courts to adjudicate claims, a second issue relevant to assessing the need and desirability of an international instrument covering traditional damage related to LMOs is whether and, if so, to what extent, the applicable substantive law of national systems allows recovery of such damage.

The principles reflected in virtually all current national civil liability regimes⁴ cover personal injury and property damage and damage to economic interests.^{5 6} As one leading casebook puts it, "any one who suffers damage

¹ Nationality is only rarely a ground for judicial jurisdiction. Strikwerda L. o.c., p. 240.

² Strikwerda L. o.c., p. 240.

³ Under the Constitutional doctrine of "alienage jurisdiction," federal courts have jurisdiction over cases "between A State, or the Citizens thereof, and foreign States, Citizens or Subjects." Pursuant to this doctrine, federal courts have been empowered to hear any case in which "an alien is a party." See Section 11, Judiciary Act of 1789. See Born GB. *International Civil Litigation in United States Courts*. Third Edition. The Hague: Kluwer Law International, 1996, p. 25.

⁴ Civil liability regimes set forth the rules that determine under which conditions a claimant is entitled to a remedy (monetary compensation, injunctory relief) as against an actor who has infringed his rights, including contractual or extra-contractual rights.

⁵ Damage to economic interests refers to damages (such as lost profits) resulting from acts that do not cause physical injury.

⁶ For a thorough analysis of the historical foundations of the principles of civil liability, Zimmerman R. *The Law of Obligations. Roman Foundations of the Civilian Tradition*. Oxford: Clarendon Press, 1996.

may look to the law for redress.”¹ In the words of the authors of an authoritative comparative law analysis, “both the law of contract and the law of tort entitle people to claim compensation for the harm they suffered.”² National liability regimes, both statutory and case law-based,³ include within their general scope damages caused by LMOs. These regimes include fault (or negligence) liability regimes, which deal with wrongfully inflicted damage, and strict liability regimes, which do not require fault or negligence.⁴

Fault liability regimes are particularly relevant to the concerns expressed by proponents of a BSP liability and redress regime. The concept of fault or wrongfulness liability, otherwise described as personal responsibility for damage, is based either on the notion of personal fault or negligence with regard to a thing, e.g. in controlling or guarding it, or the notion of vicarious liability for the thing’s “fault.” This concept is found in most, if not virtually all, common and civil law legal regimes, as well as other regimes.⁵ Fault

¹ Gerven W van et al. *Cases, Materials, and Text on National, Supranational and International Tort Law: Scope of Protection*. Oxford: Hart Publishing, 1998, p. v.

² Zweigert K, Kotz H. *An Introduction to Comparative Law*. Oxford: Oxford University Press, 1998, p. 596.

³ In common law jurisdictions, liability systems tend to be based chiefly on the principles set forth in court decisions. In civil law jurisdictions, liability statutes often play a more prominent role.

⁴ Different jurisdictions often have different mixes of fault and strict liability.

⁵ For *Africa*, see Kutner P. *Common Law in Southern Africa, Conflict of Laws and Torts Precedents*. Westport, Conn: Greenwood Press, 1990 (presenting an overview of both civil liability law and international private law of in South Africa and Zimbabwe (before and after independence), Botswana, Lesotho, Swaziland, and South West Africa/Namibia, from a comparative perspective). For *Asia*, see, for instance, Wan Azlan Ahmad and Dr Mohsin Hingun, *Principles of the Law of Tort in Malaysia*, Kuala Lumpur, Malayan Law Journal Sdn. Bhd., Charlottesville, Va.: Lexis Law Pub., 1998. See also the cases against Union Carbide in the Indian courts, Criminal Case No. RT- 8460/96. For an overview of principles of Japanese liability law, see Y. NODA, *Introduction au droit japonais*, Paris, Dalloz, 1966, pp.191-200. For the Middle East and North Africa, see J.N.D. ANDERSON, *Islamic Law in the Modern World*, London, Greenwood, 1975, p. 106; Y. LINANT DE BELLEFONDS, *Traité de droit musulman comparé*, Paris, Mouton, 1965. Islamic law bases civil liability, not on fault, but on the mere fact of usurpation or an unlawful act which causes a damage. Under these legal regimes the prescriptions of the Koran have been supplemented by teachings derived from the *Muhammad's life (sunna)*.⁵ For *Europe*, see von Bar C. *The Common European Law of Torts*, Oxford University Press, January 2001 (providing a comparative analysis of European civil liability systems). For *North America*, see Article 1910 of the Mexican Civil Code. Código Civil, 1928, Código Civil para el Distrito Federal, México: Editorial Porrúa, 1988. Borja Soriano M. *Teoría de las Obligaciones*, 7a. ed., México: Editorial Porrúa, p. 409-410. Prosser and Keeton. *Law of Torts*, 5th ed., St. Paul, Minn: West Publishing Co., 1984, p. 3-4. For *Central America*, see, e.g., Article 1045 of the Costa Rican Civil Code. Código Civil, San José: Imprenta Nacional, 1887. For *South America*, see, e.g., Article 1109 of the Argentine Civil Code and Article 1969 of the Peruvian Civil Code. See for Argentina: Código Civil de la República Argentina, Buenos Aires, Editorial Abeledo Perrot, 2003. *Tratado de Derecho Civil y responsabilidad extracontractual*. Buenos Aires: Tipográfica Editora Argentina, 1964, pp. 4, 8, 32-33; Rezzonico L. *Estudio de las obligaciones en nuestro Derecho Civil*, 9a. ed., Buenos Aires: Ediciones Depalma, 1966, vol. 2, pp. 1232, 1243-1249. Salvat R. *Tratado de Derecho*

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liability is not concerned with the inadequate quality of the product or with the thing, but turns on whether injury is caused due to the irresponsible or undesirable conduct of a person. The conduct's quality must fall below a reasonable standard, which is morally characterized as implying fault. Fault liability is a concept that can be applied to conduct in any situation. It thus concentrates on acts or omissions and asks whether such conduct falls below a reasonable standard. As such, fault liability serves as a "safety net" to control all possible irresponsible, careless, or undesirable acts, including acts involving LMOs.

Although most national liability regimes center on fault ("culpa"), in many jurisdictions, this safety net is supplemented with "pockets" of strict liability, a concept that has drawn the attention of some proponents of a BSP liability and redress regime. Strict liability regimes are an exception to the general rule of fault liability, and, accordingly, apply only to specifically circumscribed categories of activities or situations. These activities include (but are not limited to) manufacturing and distributing defective products,¹ keeping dangerous animals, handling dangerous substances, and engaging in other dangerous activities. Where it is established that certain activities impose relatively great risks on others, the trend is toward the imposition of strict liability. Strict liability is created in various ways, including specific statutes, the use of rebuttable presumptions of fault², irrebuttable presumptions of responsibility, or the elimination of defenses. Note, however, that the WHO, the OECD, the EU Commission,³ and scientific bodies in countries such the

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Civil Argentino, Fuentes de las Obligaciones, 2a. ed., actualizada por Arturo Acuña Anzorena, Buenos Aires: Tipográfica Editora Argentina, 1958, t. IV, pp. 15-18, 43-55. For Peru: Olazabal Derecho Civil, ed. 2, Cuzco, Peru: 1961.

¹ Product liability was "invented" in the US, and from there spread throughout the world. For an overview of European product liability regimes, see Hodges C. Product Liability, European Laws and Practice. London: Sweet & Maxwell, 1993, p. 6.

² Russia's and other ex-socialist countries' civil liability systems, for instance, are victim-friendly, and presume the fault of the person who caused damage. See, E.L. JOHNSON, *An Introduction to the Soviet Legal System*, London, 1969, pp. 165-170.

³ In October 2001, the Commission released the results of EC-sponsored research on GMO Safety. The Commission press release issued on this occasion states that this research "has not shown any new risks to human health or the environment, beyond the usual uncertainties of conventional plant breeding. Indeed, the use of more precise technology and the greater regulatory scrutiny probably make them even safer than conventional plants and foods; and if there are unforeseen environmental effects - none have appeared as yet - these should be rapidly detected by our monitoring requirements." EC-Sponsored Research on the Safety of Genetically Modified Organisms - A Review of Results. EUR 19884, <http://www.europa.eu.int/comm/research/quality-of-life/gmo/index.html>. Commission of the EC. Press Release: Commission Launches Roundtable on GM Safety Research. IP/01/1391 (9 October 2001). Biotech food's safety has also been confirmed by the UK Royal Society. Royal Society of Science.

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UK,¹ Australia, and New Zealand have confirmed and continue to confirm that biotechnology and the products made therewith are not dangerous *per se*. It is not the biotechnology process *as such* that might make LMOs potentially dangerous.²

Of course, LMO products can be defective in terms of their design, manufacturing or accompanying instructions. In that case, however, any damages caused by LMOs are recoverable under strict product liability regimes. Strict product liability regimes, which apply to all LMOs that are deemed products, are widespread.

Compensable damage under these regimes generally include property damage, personal injury/health damage, and, to varying degrees, also damage to other economic interests, including possessory interests.³

4. International Private Law Determines Applicable Substantive Law in the Cross-Border Context

In cases filed in national courts involving parties from more than one country, principles of international private law will designate the substantive law to be applied in the case.⁴ The options are the claimant's law, the defendant's law, or the law of the place where the relevant act was done or the damage occurred.

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Genetically modified plants for food use and human health - an update. United Kingdom, 2002. <http://www.royalsoc.ac.uk/files/statfiles/document-165.pdf>.

¹ Biotech food's safety has also been confirmed by the UK Royal Society. Royal Society of Science. Genetically modified plants for food use and human health - an update. United Kingdom, 2002. <http://www.royalsoc.ac.uk/files/statfiles/document-165.pdf>.

² The only activity involving LMOs which the scientific community has recognized as inherently dangerous is the handling of pathogenic bacteria and viruses. This activity is subject to strict containment standards in virtually all nations.

³ For purposes of liability law, possessory interests are often distinguished from property interests. Where there is physical injury to, for instance, a natural resource such as a park, the owner, who has a property interest in the park, suffers traditional damage. A lessor operating a hotel on the land, however, has a possessory interest; he may suffer harm due to lost profits if travelers stay away from the area. This type of harm is not necessarily compensable under national liability regimes.

⁴ International private law, Strikwerda explains, is aimed at regulating the problems that result from differences in legal systems and transboundary disputes. Strikwerda L. *Inleiding tot het Nederlandse Internationaal Privaatrecht*. Fifth Edition. Groningen: Wolters-Noordhoff, 1997, p. 20.

Under modern international private law, which, according to many scholars, had its origins in medieval Italy,¹ a further principle has evolved. This principle is known as the “favoritism principle.” Pursuant to this principle, the applicable law is the law that is most favorable to the claimant. Although favoritism has been criticized for lack of objectivity and neutrality, this principle has become part of the international private law of the United States² and many European jurisdictions. The favoritism principle, of course, is very favorable to a claimant who will obtain the maximum benefit available under any possibly applicable law regime. In respect of claims before US courts, this principle implies that claimants may be able to invoke the law that serves them best, i.e. typically the law that provides for the largest amount of compensation. As the US is home to many biotechnology companies, it should be noted in particular that US law is particularly attractive to claimants, as it allows foreign claimants to avail themselves of the US court system,³ including the very favorable rules on (1) discovery,⁴ which apply also extra-territorially, (2) trial by jury, and (3) damages, including possibly generous awards for pain and suffering,⁵ and punitive damages.^{6 7} In short, principles of international private law, which deal with both the procedural aspect of identifying available courts and the substantive aspect concerning applicable law, generally ensure that claims can be exercised in a cross-border context.

5. Conclusion

Based on the analysis summarized above, this paper concludes that traditional damage, including damage allegedly caused by LMOs, is already adequately covered by existing international and national legal systems. In terms of remedies, adequate institutions and mechanisms exist for the

¹ Strikwerda L. o.c., p. 33.

² In the US, Robert A. Leflar has been a strong proponent of the principle.

³ Born GB. *International Civil Litigation in United States Courts*. Third Edition. The Hague: Kluwer Law International, 1996.

⁴ Discovery is process through which claimants can force defendants to disclose information and produce documents relevant to their claims.

⁵ Under US tort law, claimants are entitled to recover for emotional harm (“pain and suffering”) resulting from wrongfully inflicted physical or, in some instances, emotional, injury.

⁶ Punitive damages are additional damage awards, above and beyond the claimant’s actual damage, that are designed to serve as punishment for the defendant’s behavior or a deterrent against similar future acts.

⁷ Bergkamp L, Hunter R. *Product Liability Litigation in the US and Europe: Diverging Procedure and Damage Awards*, *Maastricht Journal of International and Comparative Law*, No. 3, 1996.

handling of claims, whether through arbitration or filing a legal suit, in respect of traditional damage allegedly caused by LMOs. The substantive rules of national systems are broad enough to cover any traditional damage that might be caused by LMOs. Where traditional damage arises in a cross-border context, international private law principles resolve issues of jurisdiction and applicable law.

Thus, even if it were within the scope of the BSP, an additional BSP liability instrument to cover traditional damage is not necessary. In those relatively rare cases that states do not have adequate general civil liability regimes,¹ the solution is not the creation of an international LMO liability regime, which in any event hinges critically on national law structures for effective implementation. Rather, the solution is capacity building for establishing adequate national liability regimes.

¹ The problem may not be the lack of adequate substantive law, but problems with enforcing the law due to inadequate judicial systems, corruption, etc.



Environmental Liability Regimes: Approaches and Best Practices

Laura van der Meer

Article 27 of the Cartagena Protocol on Biosafety (Protocol) requires Parties to the Protocol to engage in a process to consider the appropriate elaboration of international rules and procedures for damage resulting from transboundary movements of living modified organisms (LMOs). One of the relevant initial questions is how is liability and redress for damage to biodiversity addressed in existing national, regional and international systems? What approaches have been taken to date? Another relevant question is which approaches result in the best environmental protection?

When creating legislation at the national level or legal instruments at the international level, there are two distinct approaches for liability and redress for damage to biodiversity.¹ The first is a more limited activity or sector-wise approach that provides for liability and redress for damage to the environment or biodiversity resulting from specific identified activities or substances. The second is the establishment of general or “horizontal” environmental liability legislation which focuses on holding those responsible for environmental harm liable, regardless of the activity involved.²

Part I of this paper examines the difference between these approaches. Part II provides examples of general environmental liability systems established at the national level and provides information concerning how countries may address liability in the case of damage to biodiversity even in the absence of national environmental liability legislation. Part III discusses some common features of environmental liability systems. Suggestions for a step-wise way forward for countries considering the issue of liability and redress with respect to LMOs are provided in Part IV.

¹ International, regional or national instruments may address damage to “biodiversity,” the “environment” or “natural resources.” While there can be important distinctions between these terms, for purposes of the general discussion in this paper, the terms biodiversity and environment are used.

² A combination of these approaches also is possible and involves the establishment of a general environmental liability and redress regime with differentiated rules for certain ultra-hazardous activities.

I. Sector-Specific versus General Approaches to Environmental Liability

A. International Instruments

The majority of the negotiated liability and redress regimes at the international level are sector-specific.¹ This approach has been taken because the instruments were created specifically to address damage resulting from certain ultra-hazardous activities, such as nuclear energy and maritime transport of oil, which are well known to cause significant physical harm to the environment in the case of accidents or spills.

The opposite approach is being taken pursuant to the process mandated by Article 14.2 of the Convention on Biological Diversity (CBD). At the Workshop on Liability and Redress in the Context of the Convention on Biological Diversity held in June 2001, participants noted that while it was useful to consider existing international liability regimes concerning nuclear energy, etc, such regimes take “as their point of departure an activity and subsequently considered the resulting potential for harm.”² Workshop participants also noted, however, that the considerations under the CBD are “conceptually different and [take] as their point of departure the damage caused to biological diversity ...”³

As the Chair of the CBD Liability Workshop has observed, very few of the existing sector-specific liability regimes negotiated at the international level have entered into force and it is “doubtful” that the others will ever enter into force.⁴ According to Madame Chair Marie-Laure Tanon, the regimes that have not entered into force:

are all based on the same approach through hazardous activities, with variation in scope and provisions. Work in this field has met many failures: either because the negotiations were not concluded, or because the adopted instrument did not enter into force. ... This experience calls for caution and a well-defined objective before starting another exercise.⁵

¹ Much information has already been provided to Protocol delegates concerning international liability regimes. A complete listing of this information can be found at: <http://www.biodiv.org/doc/meeting.aspx?mtg=MOP-01>.

² UNEP/CBD/COP/6/INF/5, at para. 21.

³ *Id.*

⁴ UNEP/CBD/COP/6/INF/5, Annex II, at para. 6. For a discussion of instruments that have and have not entered into force and possible reasons for this, see also related article, K. Kummer Peiry “International Civil Liability for Environmental Damage: Lessons Learned.”

⁵ *Id.*

Experience thus demonstrates that while it may be easier to negotiate a sector-specific liability instrument at the international level, such instruments may fail because countries are not willing to complete or ratify them. It is unclear whether countries would be more willing to ratify an instrument that takes a general environmental liability approach such as that contemplated under the CBD.

The clear advantage of a general approach to environmental liability, however, is that such an instrument is broad enough to address any type of actual damage to biodiversity that may occur, including any potential damage caused by LMOs. Liability and redress rules negotiated under the CBD, for example, also would cover biotechnology.¹ This is true notwithstanding the position taken by some countries that the two processes should be “separate.” By taking a general approach to environmental liability, one ensures that there is legal responsibility and redress for all actual damage to biodiversity, rather than only that damage resulting from a limited set of activities.

B. National Liability Systems

Environmental liability regimes that exist at the national level are based on the “polluter pays” principle whereby polluters must repair the environmental damage they caused, must pay for the cost of those repairs, or, in rare cases, must compensate certain parties if the damage is irreversible. The idea behind such legislative regimes is that the party who caused the environmental damage should be responsible to injured parties through legal actions allowing recovery for that damage. As such, environmental liability regimes not only provide a general obligation to repair environmental damage, but have a preventive effect. Some countries include environmental damage as part of their national civil liability systems which cover traditional damages (harm to health and property);² others address environmental liability separately. In many cases, the environmental liability systems are or include administrative law regimes.³

¹ UNEP/CBD/COP/6/INF/5, Annex II, at para. 23 (“As a matter of fact, the activity covered by Article 27 of the Protocol is within the scope of the wider Article 14” of the CBD.)

² For a discussion of civil liability for traditional damages, see related article L. Bergkamp “Liability and Redress: Existing Legal Solutions for Traditional Damage.”

³ Administrative law is that body of law where decisions are made in a quasi-judicial or administrative tribunal context that is usually administered by a government policy-making body as opposed to in a traditional court administered by a judge as would be the case in civil law disputes.

At the national level, one observes the same two approaches for addressing environmental liability discussed above. Some countries create sector-specific liability regimes by including a list of activities for which parties may be liable for environmental damage¹ while others impose liability on a limited number of activities and actors by reference to a list of hazardous substances.²

Countries with truly general environmental liability legislation, on the other hand, do not distinguish among activities or products. As such, a general environmental liability regime can address any possible type of actual damage to the environment falling within the scope of that regime by any product, substance or action.

In a review conducted by UNEP in 2002, twenty-nine countries were identified as having environmental liability legislation.³ Of these, twenty-two countries have some version of a general environmental liability regime.⁴ As is the case internationally, this general environmental liability approach offers advantages in terms of broader environmental protection compared to sector-specific coverage.

II. Examples of General Environmental Liability Regimes

Several countries provide examples of ways in which general environmental liability legislation can be framed in a manner that addresses a wide range of environmental protection concerns. The following examples offer basic information about how some countries have addressed environmental liability but is not intended to provide a comprehensive description or analysis of the legal situation in each country.

¹ See, e.g., Denmark's *Act on Compensation for Environmental Damage Act*, 225/94 (1994) [hereinafter *Denmark*] which applies to industries engaged in steel, wood and plastic manufacturing or processing, chemical and glue manufacturing, printing operations, and the generation of heat, among others. Sri Lanka's *National Environmental Act*, 1980, 1988, [hereinafter *Sri Lanka*] Part IV B also provides a listing of activities that trigger the environmental liability provisions.

² The U.S.A.'s *Comprehensive Environmental Response, Compensation, and Liability Act*, 42 U.S.C. ss. 9601-9675 (1980) [hereinafter *U.S.A.*], has the broadest scope for imposing liability, including a wide list of "hazardous substances," the release of which triggers liability. India's *Environmental (Protection) Act*, 1986, s. 25 [hereinafter *India*], applies to "hazardous substances," for which the discharge limits and handling requirements are set by government regulations.

³ *Liability and Compensation Regimes Related to Environmental Damage: Review by UNEP Secretariat*, United National Environment Programme. Nairobi, 2002 [hereinafter *UNEP Review*].

⁴ *Id.*

A. Canada

Several Canadian jurisdictions have general environmental liability legislation which addresses a wide range of environmental protection concerns, including air, water, land, toxics and hazardous wastes.¹ Such legislation typically has a definition of “environment” which is extremely broad so as to include biodiversity, and to allow for a wide range of remedies available to protect the environment. For example, the province of British Columbia’s *Waste Management Act*² defines “environment” as “the air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed.”

The primary objective of this type of legislation in Canada is to provide the government with the means to allow environmental clean-up and the recovery of environmental restoration costs. A number of statutes create more general rights, allowing claimants to obtain monetary damages or providing private civil actions for injunctive relief for persons suffering damage or loss resulting from the violation of environmental liability statutory provisions. In general, access to Canadian courts is not determined by the residency status of a possible claimant, although the scope of a particular environmental liability statute might be restricted to the protection of the environment in a specific Canadian jurisdiction. Canadian regulators have made minor amendments to existing legislation at the national level in order to ensure it would cover possible damage to the environment caused by LMOs.

B. Nepal

Nepal is another example of a country that has a general environmental legislative regime. Nepal’s *Environmental Protection Act*³ establishes governing principles on liability and redress for environmental damage in its preamble, which sets the goals of maintaining a “clean and healthy environment by minimizing, as far as possible, adverse impacts likely to be caused from environmental degradation on human beings, wildlife, plants, nature and physical objects; and to protect the environment with proper use and management of natural resources.” The act provides compensation for “any form of damage” - to environment, public life and people’s health - caused by a person, organization or proponent who causes “significant adverse effects on the environment.” Such adverse effects are defined by reference to “pollution” which is defined as “activities that significantly degrade, damage the environment or harm on the beneficial or useful

¹ See British Columbia’s *Waste Management Act*, R.S.B.C. 1996, c. 482 [hereinafter *British Columbia*] and Ontario’s *Environmental Protection Act*, R.S.O. 1990, E. 19 [hereinafter *Ontario*].

² *Id.* s. 1(1).

³ 2053 (1997 A.D.) [hereinafter *Nepal*].

purpose of the environment, by changing the environment, directly or indirectly.” “Environment” is defined as “[t]he interaction and inter-relationship among the components of natural, cultural and social systems, economic and human activities and their components.”

The act also includes financial limitations on the amount recoverable if monetary damages are allowed and requires that such compensation must be “reasonable.” In addition to financial compensation for environmental damage, the government authority can shut down the operations of those who are polluting or have polluted the environment, under the definitions of the act, and also can impose fines.

C. The Philippines, Poland and Argentina

Section 16, Article II of the Constitution of the Philippines establishes a general duty on the State to preserve or protect the environment. This article vests in the State the ultimate responsibility to preserve and protect the environment and provides that, “the State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.” In *Oposa v. Factoran* (1993), the Supreme Court of the Philippines used this provision providing for “the people’s right to a healthful ecology” as an instrument for the reparation of environmental damage. This provides an example of how, even without an environmental liability regime, a court can construe a constitutionally-provided right to a healthy environment to allow for reparation of environmental damage.

Poland is another example of a state in which the Constitution provides the basis for environmental liability. The Constitution of 1997 creates general national obligations with respect to the protection of the environment and liability for environmental damage.¹ In Argentina, Article 41 of the 1994 National Constitution also enshrines the protection of biological diversity and incorporates the concept of reparation of environmental damage in general terms.

¹ The Philippines and Poland also have national laws and regulations governing liability for damage to the environment that could apply to possible environmental damage from LMOs. In Poland, for example, the *Nature Protection Law* and the *Environmental Protection Law* both impose liability for damage to biological diversity. Redress measures include administrative penalties, restoration of the damaged environment, and in certain situations, criminal liability.

III. Common Features of General Environmental Liability Regimes

As is clear from the examples above, national environmental liability regimes differ greatly. Regardless of whether a sector-specific or general approach is taken to environmental liability, however, some provisions are standard in almost all existing environmental liability legislation. Common features found in most national liability regimes examined¹ include the following:

A. Definition of Damage

Defining “damage” gets to the issue of what *actually* constitutes harm to the environment or biodiversity. In 1998, a UNEP Working Group of Experts on Liability and Compensation for Environmental Damage created a working definition of environmental damage as “a change that has a measurable adverse impact on the quality of a particular environment or any of its components, including its use and non-use values, and its ability to support and sustain an acceptable quality of life and a viable ecological balance.”² To date, however, there is no general consensus as to a definition of environmental damage in international law.³

Whatever the precise definition of environmental or biodiversity damage ultimately adopted, the UNEP experts caution that environmental damage “should not be confused with traditional damage, which denotes injury or loss to persons or property.”⁴ In all cases environmental damage must be established in order to create a cause of action; in other words, one must prove “actual damage” before compensation is required.

¹ This assessment is based on a review of 19 general environmental liability regimes: USA, Canada (federal law and the provincial laws of British Columbia and Ontario), Italy, Denmark, Oman, Kenya, Nigeria, China, Japan, Korea, India, Maldives, Nepal, Sri Lanka, Cambodia, Thailand, and Vietnam.

² *UNEP Review*, supra note 13, at 27.

³ *Id.*

⁴ *Id.*

B. Threshold

Most environmental liability regimes provide a minimum threshold for triggering the application of liability rules. Regimes refer to damage that is “significant,”¹ above a tolerable limit² or prescribed standard³ when determining the threshold beyond which environmental damage might trigger liability. Other countries establish a threshold by carefully defining “adverse effects”⁴ or “pollution.”⁵

C. Channeling Liability

The general rule under environmental liability regimes is to channel liability to the “owner” or the “operator” - in other words, the person who owns the property where the environmental damage took place, or the person who has operational control of the relevant activities at the time of the incident causing damage. Other countries use different terms, but include the elements of “owner and “operator” in defining those liable for environmental damage.⁶

¹ See *Nepal*, *supra* note 3, s. 7 which creates a threshold whereby “significant adverse impacts on the environment” trigger liability.

² See *Denmark*, *supra* note 1, only allows liability to apply when damage is over a specific “tolerable limit” as outlined by environmental authorities.

³ See Schedule II of *India*, *supra* note 2, lists general standards for discharge of environmental pollutants and their maximum limits of concentration allowable.

⁴ See *Ontario*, *supra* note 1, s.1(1) definition of “adverse effect” as meaning one or more of, (a) impairment of the quality of the natural environment for any use that can be made of it, (b) injury or damage to property or to plant or animal life, (c) harm or material discomfort to any person, (d) an adverse effect on the health of any person, (e) impairment of the safety of any person, (f) rendering any property or plant or animal life unfit for human use, (g) loss of enjoyment of normal use of property, and (h) interference with the normal conduct of business.

⁵ See Kenya’s *Environmental Management and Coordination Act*, 1999 [hereinafter *Kenya*]. See also *India*, *supra* note 2, s.2, which refers to “environmental pollution” defined as “the presence in the environment of any environmental pollutant” and “environmental pollutant” is defined as “any solid, liquid or gaseous substance present in such concentrations as may be, or tend to be, injurious to the environment.” *Nepal*, *supra* note 3, s.2, addresses damage by reference to “pollution” meaning, “the activities that significantly degrade, damage the environment or harm on the beneficial or useful purpose of the environment, by changing the environment, directly or indirectly.”

⁶ Section 2(f) of *India*, *supra* note 2, channels liability to an “occupier” which is defined as “in relation to any factory or premises, means a person who has, control over the affairs of the factor or the premises and includes in relation to any substance, the person in possession of the substance.” Both *U.S.A.*, *supra* note 2, s. 9607(a) and Nigeria’s 1999 draft bill *Response, Compensation and Liability for Environmental Damage Act* [hereinafter *Nigeria*] impose liability on “potentially responsible parties” (PRPs) which includes: current owners and operators of a facility at the time the hazardous substances were disposed of, persons arranging for transport and disposal of hazardous substances, and transporters of hazardous substances.

D. Type of Liability

Environmental liability regimes, like civil systems for traditional damages, establish the type of liability to be applied in the case of actual damage. Fault-based liability holds the defendant liable only for damage inflicted intentionally or through negligent behavior and is the general rule. Strict liability holds the party conducting these activities responsible regardless of fault or negligence and generally is reserved for ultra-hazardous activities. It is widely recognized that activities involving biotechnology are not inherently dangerous and are entirely different than the ultra-hazardous activities for which strict liability has traditionally been applied.¹

E. Standing to Bring Claims

Since protection of the environment is in the public interest, the State typically has the first responsibility to act if the environment is or threatens to be damaged. Some countries allow for actions brought by an individual or others against a party causing environmental damage; however, most regimes allow only for a public trustee to act on behalf of the public to recover for environmental damage.²

F. Defences

Where strict-liability is employed to address ultra-hazardous activities, the regime typically includes three generally recognized defenses in the event of environmental damage:

- (a) acts of God (*force majeure*) such as natural disasters;
- (b) war or hostilities; and
- (c) intentional or grossly negligent acts or omissions by a third party.³

“State of the art” and “permit” defenses are important features in such systems.⁴

¹ For a discussion of these concepts and LMOs see related article, L. Bergkamp, “Liability and Redress: Existing Legal Solutions for Traditional Damage,” at Section 3.

² See *British Columbia*, *supra* note 1; *Denmark*, *supra* note 1; *Kenya*, *supra* note 5; *India*, *supra* note 2; *Nepal*, *supra* note 3; *Nigeria*, *supra* note 28; *Ontario*, *supra* note 1; *Sri Lanka*, *supra* note 1; and *U.S.A.*, *supra* note 2.

³ See *British Columbia*, *supra* note 1, s. 26(6); *Ontario*, *supra* note 1, s. 2; *Nigeria*, *supra* note 28; and *U.S.A.*, *supra* note 2, s. 9607(b).

⁴ See, e.g., Thailand’s *Enhancement and Conservation of National Environmental Quality Act*, 1992. B.E. 2535 (includes the permit defence). For a discussion of the state of the art and permit defenses see related article, S. Abramson “Implications of Proposed TWN and OAU Model Liability Language” in section addressing “Types of Liability.”

G. Financial Limits

Limits usually apply on the amount of financial compensation available for a particular case of environmental damage.¹ This is most often the case where regimes are based on strict liability. In this situation, the financial limit provides the necessary balance between the plaintiff's and defendant's interests and adds some predictability to the liability regime.

H. Time Limits

The limitation of liability in time is a common feature of environmental liability regimes. They tend to include absolute time limits within which an action for environmental damage may be brought at all. For example, a party that caused environmental damage may only be liable for that damage occurs for a period of 20 years after the damage occurred. Most also set a period of time during which a claimant is allowed to bring a claim after the damage and those who caused the damage have been identified. The existing regimes typically set a time limit of three years for such a claim to be brought.

I. Remedies

When damage occurs, the primary objective usually is restoration of the environment. Most countries give regulatory authorities the power to either clean-up the environmental damage and reclaim the costs of that clean-up, or order those who caused the damage to pay the costs of restoration or prevention measures directly.² Monetary compensation for the damage, if the site is not able to be restored to its state prior to the environmental damage, also is ordered occasionally.

IV. Environmental Liability: A Step-Wise Approach

A. Analysis of the Existing National Situation

Countries concerned about liability as related to LMOs should consider whether any environmental liability legislation is already in place at the national level. As the examples above demonstrate, existing general environmental liability regimes may already apply to and address any possible damage from LMOs or may require only minor amendments to cover damage from LMOs if it were to materialize.

¹ Some countries set monetary limits for compensation (see *U.S.A.*, *supra* note 2, s. 9601(c) which allows for up to \$50,000 for natural resource damages). Others require that compensation must be "reasonable." See *Nepal*, *supra* note 3, s. 17.

² *U.S.A.*, *supra* note 2, creates damage for environmental remediation- creates liability for private parties either to implement government-approved clean-up programs at each site or reimburse the government for clean-up expenses. Liability is often linked to the payment of the reasonable costs of restoration measures or preventative measures.

In the absence of an existing environmental liability regime, countries should consider whether such a regime should be developed at the national level. Note in this regard that one of the recommendations of the CBD Liability Workshop was to convene a Legal and Technical Experts Group to consider, among other things, “the possible introduction of elements, as appropriate, to address specifically liability and redress relating to damage to biological diversity into existing liability and redress regimes.”¹ Whatever action is taken at the international level, whether under the CBD and/or the Protocol, functioning national legal systems are necessary to apply international rules.²

In the meantime, the Philippines example shows how even a general constitutional provision may be used to provide for liability and redress for environmental damage. Similar provisions or other mechanisms may be available in other countries.

B. Capacity Building to Fill Identified Gaps

At the CBD Liability Workshop, experts discussed the fact that “since most known causes of damage to biological diversity were caused by internal, national activities,” consideration should be given to the development of guidelines for national legal systems.³ This conclusion was supported by recognition of the national sovereignty concerns that prevent international regimes from addressing purely internal matters.⁴

Indeed, the CBD liability experts found a significant need for capacity building in this field. The report of their discussions states that:

A number of experts pointed to the need for capacity-building to strengthen environmental legislation in developing countries, which often lacked trained lawyers, judges, enforcement officials and the infrastructure to adequately implement emerging developments. It was also observed that, in applying a liability and redress regime, a country could only determine a case of harm to or loss of biological diversity if it had already been able

¹ See UNEP/CBD/COP/6/INF/5, Annex I, at para. 4(a).

² See related article, K. Kummer Peiry “International Civil Liability for Environmental Damage: Lessons Learned” at Part 4. See also UNEP/CBD/COP/6/INF/5, Annex II, para. 17 (“... a majority of cases of damage to biological diversity [is] occurring in a purely national context, so that national law [is] of crucial importance to achieve the objective of the Convention.”).

³ UNEP/CBD/COP/6/INF/5, at para. 30.

⁴ UNEP/CBD/COP-6/INF/5, at para. 45. The limitation placed on the possible scope of liability discussions at the international level in light of national sovereignty concerns is explicit in Article 14.2 of the Convention.

to inventory what was present; such was not the case for many countries, particularly the developing countries.¹

UNEP also has recognized the need for capacity building with respect to environmental liability and has identified a number of proposed activities including the need to:

- Develop guidelines, best practices or recommendations that otherwise facilitate the development and effective use of national and international environmental liability systems; and
- Develop capacity building programs for public authorities, including the judiciary (and where appropriate, the establishment of environmental courts and chambers), NGOs and other stakeholders, in particular, to promote and facilitate the use of national and international environmental liability systems.²

Additional work by UNEP on these and other activities is anticipated in 2004.

V. Conclusion

This paper concludes that general environmental liability regimes may be able to adequately address possible environmental damage caused by LMOs. Such instruments provide the structure, process and remedies for addressing these types of claims and the rules can be broad enough to address any type of proven environmental damage that may occur, including any potential damage caused by LMOs. In the absence of any evidence of actual damage caused by LMOs, it appears that a more practical and efficient way of dealing with liability and redress for possible environmental damage relating to LMOs would be to address such potential damage in the context of a general environmental liability regime - either at the national level starting with the guidance provided in this document and the numerous capacity-building efforts related to environmental liability, or at the international level as is taking place in the Convention liability discussions. Using a general approach such as the ones described here allows for the establishment of a comprehensive and integrated approach to environmental liability.

¹ UNEP/CBD/COP/6/INF/5, at para. 24.

² UNEP/DEPI/L&C Expert Meeting 1/1, at para. 12.



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Guide for Countries Considering Liability and Redress for LMOs

Rachel G. Lattimore

As part of the development of their national biosafety frameworks, many countries are making decisions about the need to establish a liability regime at the national level that would be specific to activities related to Living Modified Organisms (LMOs) or biotechnology. Before pursuing the development of any new liability rules, a country must first consider its existing legal situation. A failure to thoroughly examine existing legal standards can lead to internal conflicts in the law, unjustified discrimination against particular activities, and general confusion. This paper provides a series of questions that a country may wish to consider when it begins to decide if it needs a liability regime specific to activities relating to LMOs.

1. Is There an Existing Regulatory System in Place to Review LMOs for Safety?

Many potentially dangerous items, such as drugs or pesticidal chemicals, are used without the need for a specific liability regime in place to address harm they may cause. Many countries have determined that more general laws are sufficient to address risks posed by these products, because the government's regulatory agencies have reviewed these products for safety before they are sold to the public. This process allows a country to prevent the sale of a product considered too dangerous to be addressed by the general liability regimes. Governments make these decisions based on scientific review of the potential harms these products may pose to humans, animals or the environment.

Much of the work being done as countries establish biosafety systems involves putting into place systems that will allow countries to review safety information for LMOs before deciding whether to import, use or develop them. If science-based risk assessment and consideration of risk management measures result in the identification of an unacceptable risk in light of the potential receiving environment, a country may determine that importation, use or development of a particular LMO may not be allowed.

However, by reviewing the scientific information available for an LMO, a country may determine that the LMO presents no greater risk to humans, animals or the environment than other types of similar, but non-LMO, products, and allow the LMO into the country. Once this decision has been made, the government may determine that it is appropriate to treat harm that may arise from activities related to that LMO in the same way it treats harm from other types of similar activities. For example, defective LMO-derived seed may be treated in the same manner as defective non-LMO seed, or laboratory accidents may be treated alike based on the harm they cause, not whether or not an LMO is involved.

Question A: Do you have a system in place to review the safety of LMOs before they are allowed into your country?

- (i) If no, you may wish to take advantage of aspects of the Biosafety Protocol that provide information and assistance in areas of receiving and reviewing safety information for LMOs before considering a liability regime.
- (ii) If yes, you may wish to consider whether, in light of the scientific information reviewed for LMOs, and the ability to keep unacceptably dangerous LMOs out of the country, whether a specific liability regime for those LMOs allowed into the country is necessary.

2. Is There an Existing Traditional Liability Regime?

Almost every country has some legal regime to address claims for traditional damages such as personal injury or property damage.¹ If one person runs over another in a car, the person who was injured may make a claim to recover for money spent on a doctor's visit. In the same way, if one person throws a vial containing a dangerous LMO virus in someone else's face, and the victim becomes infected with the virus, the sick person could recover for money spent on a doctor's visit.

Question A: Do you have an existing legal regime to address traditional damage claims (claims of personal injury or property damage)?

- (i) If yes, traditional damage claims arising from LMO-related activities can be treated like damage claims arising from other activities. A new liability structure may not be needed.
- (ii) If no, you may wish to consider developing a legal regime under which those who have been injured, or whose property has been injured, may seek redress, whether or not LMOs are involved.

Question B: Are there gaps in your existing traditional liability regime that would not address claims arising from LMO-related activities?

- (i) If yes, you may wish to consider whether these gaps would apply to the same claim if LMOs were not involved. In the example above, if a person could not make a claim for relief if a vial of any type of dangerous virus were thrown on him, it may be more worthwhile to address this gap, than only an instance where the vial contains an LMO.
- (ii) If no such gaps exist, traditional damage claims arising from LMO-related activities can be treated like damage claims arising from other activities. A new liability structure is not needed.

¹ See related article, L. Bergkamp, "Liability and Redress: Existing Legal Solutions for Traditional Damage," at 4.

3. Is There an Existing Product Liability Regime?

In addition to general traditional liability regimes, some countries have also established product liability regimes to help to assure the safety of consumer products. Product liability has been defined as liability placed on the producer, distributor, importer, retailer or other supplier of products for personal injury or property damage (traditional damage) caused by the use of the product.¹

For example, a product liability regime could hold the manufacturer of cars liable if the design or manufacture of those cars was defective in some way that led to traffic accidents where people were hurt or killed, or cars were damaged. In the same way, such a regime would hold the manufacturer of LMO seed liable if the design or manufacture of that seed was defective in some way that caused people who ate food grown from the seed to become ill.

Question A: Do you have an existing product liability regime to address damage claims that arise from defective products?

- (i) If yes, a damage claim arising from a defective LMO can be treated like other damage claims under your existing product liability regime. A new LMO-specific liability structure is not needed to address these types of claims.
- (ii) If no, you may be able to address harms from defective products under your general liability system (see Section 1, above), or you may wish to consider adopting a broad-based product liability regime, that could include all products, from cars to food, that could pose a danger to consumers if manufactured in a defective way.

4. Is There an Existing Environmental Protection Regime?

A number of countries have established a general regime of environmental protection. These regimes recognize that much of human behavior has an impact on the environment, but draw distinctions between acceptable and unacceptable impacts based on the type and degree of environmental harm caused. For example, a country may allow household waste to be buried simply in plastic bags, but may require more elaborate storage containers for

¹ Howells, G. Comparative Product Liability. Aldershot: Dartmouth, 1993, p. 1.

dangerous chemicals. These environmental regimes may include penalties or liability provisions for those who do not meet the environmental standards that have been established.

Question A: Do you have an existing environmental protection regime?

- (i) If no, you may wish to consider developing a system to address environmental harm arising from a number of sources. There are many activities that may result in environmental harm if not properly managed, including logging, farming, and factory pollution. You may find it productive to focus initial efforts on activities known to cause environmental harm in your country. UNEP and other organizations are assisting countries to develop new or strengthen existing environmental liability legislation.¹
- (ii) If yes, please proceed to the next question.

Question B: Would LMO-related activities that could harm the environment be addressed under your existing environmental protection regime?

- (i) If yes, you may treat any environmental harm arising from LMO-related activities like other types of environmental harm.

¹ In recognition of the value of general environmental liability regimes, UNEP has prioritized the following activities as activities to evaluate and assess in relation to capacity-building needs:

(i) develop guidelines, best practices or recommendations that otherwise facilitate the development and effective use of national and international environmental liability systems;

(ii) develop capacity building programs for public authorities, including the judiciary (and where appropriate, the establishment of environmental courts and chambers), NGOs and other stakeholders, in particular, to promote and facilitate the use of national and international environmental liability systems; and

(iii) promote research to enhance continued improvement of liability regimes including the identification of the reasons why some agreements covering environmental liability and compensation have not attracted wider State acceptance (UNEP/DEPI/L&C Expert Meeting 1/1 at para. 12).

- (ii) If no, you may wish to determine why certain types of activities were included in your existing environmental protection regime, and others were not. In some systems, only certain activities are considered sufficiently threatening to the environment to be included in such a system. You may wish to examine the factors your country used for including these activities, and determine whether LMO-related activities pose a similar risk to the environment.

Question C: Does your existing environmental protection regime allow claims to be brought against those who harm the environment?

- (i) If no, you may wish to consider why such provisions were not put into place for other types of environmental harm. Many environmental protection regimes have some system of penalties for those who violate the system's requirements. You may find that adopting such a system for all types of violations makes your environmental protection more effective.
- (ii) If yes, your environmental protection regime may allow claims arising from LMO-related activities to be treated like environmental damage claims arising from other activities.

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Implications of Proposed TWN and OAU Model Liability Language

Stanley H. Abramson

This paper examines the implications for countries of adopting the liability provisions found in the Third World Network (TWN) Model Biosafety Law (published in 1999 prior to the conclusion of the Cartagena Protocol on Biosafety) and the May 2001 Model developed for the Organization of African Unity (OAU). Both Models have been made widely available and have been utilized by a number of countries in developing their national biosafety frameworks.

The use of models to identify and analyze different options and approaches can be valuable.¹ Wholesale copying of any model, however, can lead, unintentionally, to serious adverse consequences. This is particularly true with respect to models, such as those proposed by TWN and OAU, that depart radically from widely adopted and longstanding legal regimes. Inserting the kind of liability provisions proposed in the TWN and OAU Models in national biosafety legislation would create a danger of conflicting with existing legislation and legal principles that already exist to address any hypothetical scenario of concern were it to materialize.² Moreover, adoption of the provisions offered in the TWN and OAU Models would likely erect a barrier to accessing biotechnology research, development, foreign direct investment, food aid and technology transfer and cooperation through the

¹ The author offers, in this regard, the Model Act developed in 2002, along with Laura van der Meer, titled "Proposed Provisions for a Transparent, Effective and Workable Biosafety Regulatory Framework," available without charge at www.arentfox.com/modelbiosafetyact.pdf.

² Notwithstanding intensive governmental, academic and commercial activity and oversight for nearly two decades, not a single instance of actual harm to health, safety, or the environment has ever been confirmed for any LMO approved for commercial use.

establishment of a discriminatory liability system that creates uninsurable risk without scientific justification.

This paper comments on some of the most problematic provisions in the TWN and OAU Models and describes the negative implications of adopting these approaches. It should be noted that this critique is not intended to be comprehensive: both systems also suffer from the omission of critical definitions and standard legal provisions (e.g., liability limitations and defences) which are not addressed here.

SCOPE

Both the OAU and TWN Models provide liability for “any” harm caused directly or indirectly by GMOs¹ and products thereof, including personal injury, property damage, economic loss, damage to agricultural production systems, and damage to the environment or biodiversity. The OAU version also includes damage or destruction “arising from incidence of public disorder triggered” by GMOs or products thereof.

Lack of Precision in Defining Harm Erects Barrier to all Biotechnology Activity

Both Models fail to define in sufficiently precise legal terms the “harm” or “damage” for which an actor may be held liable, opting instead for an “everything under the sun” approach whether caused directly or indirectly by a GMO.

A system imposing liability for “any harm” from GMOs or products thereof would be much broader than may appear at first glance. Under such a system, for example, one could bring a legal action against a local store selling socks made with GMO cotton for any injury – no matter how insignificant – allegedly caused by the socks (e.g., economic loss of a competing merchant who lost sales because he could not obtain a supply of the socks or bodily injury to a purchaser who slips and falls while wearing the socks). Similarly, the provision in the OAU version providing for liability for damage or destruction caused by public disorder would mean that a public research institute half way around the world could be held responsible for spray-painting of public buildings or smashing of windows by demonstrators protesting importation of a GMO for local research and development.

¹ The TWN and OAU Models use the term “GMO” instead of “LMO.” While this terminology is not problematic *per se*, both Models fail to define the term in a manner consistent with the terminology of the Cartagena Protocol.

When such an approach is taken, actors are unable to ascertain with any certainty that for which they may be held responsible. This creates an unacceptable risk to engaging in any activity and will result in reduction of biotechnology research and development at institutions within and outside of the country. It also may negatively impact foreign direct investment, food aid, technology transfer and other important activities. As an example, due to uncertainty surrounding potential liability, investors may be reluctant to fund development of crops that can grow better and produce greater yields under local soil, pest or climatic conditions.

Traditional Damages Already are Covered in Existing Legal Systems

Many of the kinds of damage included in these Models are known in legal parlance as “traditional damages.” Traditional damages include personal injury, property damage and other economic harm. Such damages already are covered by virtually every legal system in the world and need not be specified in connection with national biosafety implementing legislation. Indeed to do so creates the danger of creating inconsistencies with existing national laws that are in place to ensure compensation in all cases of actual harm to persons, property or other economic interests.

Consideration of Environmental Liability Requires Review of Current Laws

The TWN and OAU Models also provide for liability for harm to the environment or biodiversity. A major problem, in this regard, is the lack of a definition for these terms in the Models. As an example, in the absence of a clear definition, a liability regime might ultimately determine that the concept of harm includes any change to the status quo regardless of whether actual adverse effects can be identified. Without a definition that is sufficiently precise, actors cannot assess the level of risk they may face in engaging in any activity and may therefore avoid countries that put in place such vague liability laws.

The Models also fail to take account of the fact that a law providing for liability for harm to the environment or biodiversity may already be in existence. If so, such a law would apply if actual damage were to occur. Even in cases where environmental liability laws have not yet been developed, constitutional or other legal provisions may be available to ensure that those who cause harm to the environment are held responsible. Therefore, countries must first consider how liability for environmental damage is or may be addressed under existing laws or other legal documents. Applying existing law, which will generally include the relevant definitions, can avoid the deterrent effects outlined above, and also avoids the need to incorporate the proposed Model language in the national biosafety legislation.

General Liability Approaches Provide Full Protection for the Environment

If existing legislation or legal documents do not provide a basis for liability for environmental damage, attention should be given to establishing a general environmental liability regime at the national level that provides for measurement, valuation, restoration, etc. in the case of actual damage to the environment. Such a scheme would cover all activities that result in actual and significant harm.

The type of activities that cause substantial damage to the environment at the present time are well-known and do not include biotechnology. Nevertheless, a general approach ensures that any theoretical harm resulting from biotechnology would be covered if it were ever to materialize. A general environmental liability approach therefore provides a better and more efficient system that is aimed at true environmental protection because of its universal coverage.

General Environmental Liability Avoids Discrimination and Disincentives

Taking a general approach to environmental liability also avoids the type of discrimination that would result from creating a biotechnology-specific liability regime. There is no scientific basis or use experience which would justify the establishment of a regime that discriminates against biotechnology (or products thereof) as compared to other technologies or methods. Furthermore, a general approach avoids creating a strong disincentive for indigenous and foreign institutes, university scientists, companies and others to engage in research and development to meet local needs or to invest in biotechnology activities in developing countries.

TYPE OF LIABILITY

Both Models provide for "strict liability."

Strict Liability is Reserved for Ultra-hazardous Activities

Strict liability imposes liability with the need to prove causation but without the need to demonstrate fault. Strict liability generally is reserved for ultra-hazardous activities such as blasting, activities with space objects, oil transport, and nuclear processes. These are activities for which it is well known that an accident would result in real and substantial physical harm. In these cases, those undertaking the ultra-hazardous activities are considered to owe a strict duty of safety to those coming in contact with the material or activity. There is no scientific basis or use experience that would justify the classification of the highly regulated and governmentally approved use of modern biotechnology as such an ultra-hazardous activity.

Where strict liability is established, it is critical that the system include two common defences that may be raised by the defendant. The first is the “permit defence” which prevents liability where the activity has taken place in accordance with government authorization. This is not a blanket defence for the owner of the permit, but a defence for specifically allowed activity. Including this defence not only promotes compliance but encourages government officials to take greater care in their permitting practices. It further introduces an element of certainty in the system that increases the possibility of obtaining insurance coverage.¹

The second is the “state-of-the-art defence” in which the defendant can avoid liability by demonstrating that his activities were not considered harmful according to the state of scientific and technical knowledge at the time the activity took place. This defence is important to providing balance, predictability and to avoid discouraging innovation.

Fault-based Systems Promote Care

Fault-based systems are commonly used for activities that are not inherently dangerous. Such a system requires that the claimant provide that the damage has occurred because of the wilful or negligent act of the defendant. By requiring proof of fault, this type of liability system creates an incentive for operators to take care with their activities to avoid liability.²

The Proposed System Fails to Promote Care and Discourages Biotechnology

A system that establishes strict liability for the kind of undefined harm envisioned in the TWN and OAU Models neither promotes care nor offers the standard defences available when strict liability is imposed. As such, the liability system would simply discourage any activity with biotechnology in a country adopting it.

¹ In some countries, actions taken in violation of regulatory requirements are effectively subject to strict liability under the doctrine of negligence per se.

² Operators would also be likely to take cost-efficient, preventative measures under a strict liability regime, assuming they were willing to operate in that environment at all. Among other things, strict liability creates a risk of increased total cost unless the defence of contributory negligence is available.

STANDING AND PROTECTION OF CLAIMANTS

The TWN and OAU Models contain similar provisions allowing any person or group to file a claim if that person/group believes it to be in their interest, the interest of those affected or the public interest. Both Models also include a provision that prohibits an award of court costs to the defendant in any case as long as the claimant instituted the proceedings “reasonably out of concern” for the public interest or in the interest of protecting human health, biological diversity or the environment.

Failure to Limit Claimants to Those Directly Affected will Flood Court Systems

In both national and international systems, legal standing to bring a claim is limited to those that suffer actual damage. This limitation ensures that those who come to court have direct and important interests and avoids flooding the courts with cases brought by those who are not directly impacted. Persons in this latter category are not without remedy. Instead, their complaints are properly part of the political sphere, not the court system. In some cases, civil society organizations are permitted to bring claims as well. Generally, however, these are only claims to challenge acts or omissions by government officials in matters relating to environmental issues with which the group is involved or has special expertise. In no case has any international body accepted that public interest groups may seek compensation for environmental harm. Where national legislation has addressed this issue, it is generally the state that is authorized to assert claims in respect of such damages.

Disallowing Costs will Result in Baseless Suits and Delay Productive Activity

In addition to providing an unprecedented and wide-open standing provision, both Models explicitly protect claimants as long as they filed cases based on “reasonable concerns.” A court would have great difficulty determining which concerns were “reasonable enough” to justify taking up the court’s time at the public’s expense. The option of requiring an unsuccessful claimant to bear court costs is the minimum required to discourage those who simply disagree with or wish to block certain activities from flooding legal systems and harassing defendants with baseless claims.

POTENTIALLY LIABLE PARTIES

Both the TWN and OAU Models provide for liability for the person “responsible for the activity which results in the damage” as well as the “provider, supplier, or developer of the GMO(s) or products thereof.”

Liability Should Attach Only to Those That Have the Relevant Degree of Control

The general approach to liability in both national and international systems is to assign a duty of care to those persons that have control over a given activity. Only where a person has breached his duty of care, either intentionally or negligently, is liability imposed. If more than one actor breaches his duty of care, the liability must be apportioned among the responsible actors.

The TWN and OAU Models begin with the idea of holding persons responsible for the activity resulting in the damage liable but also provide for liability for a whole host of other actors that may not be at fault. Providing for liability for the entire chain of persons that may handle or be involved in the movement of a GMO does not provide better protection: instead, it creates an unfair and unpredictable legal environment. Persons should not be held responsible for events that are not under their control.

LIMITATIONS PERIOD

The TWN Model allows for filing a civil action within a “reasonable time” after the person could reasonably be expected to have learned of the harm, taking into account certain listed factors. The OAU version states that the timeframe for filing of a civil action shall “commence from the date on which the person ... could reasonably have expected to have learned of the harm”

Limitations Periods must be Specifically Defined

Liability laws typically include a specific time period during which legal claims may be filed under that specific law or make reference to a general statute of limitations that sets forth time limits for all cases. Some national systems provide for two types of limitations: one from the time the claimant could reasonably have known of or discovered the alleged damage (a relative test that usually provides a short period such as three years) and one from the time of the incident (an absolute test that usually provides a relatively long period such as 20 years). As is the case with many other aspects of liability legislation, the limitations period strikes a balance between the rights of claimants and the need for certainty in the legal

system and by those engaged in various activities that might be the subject of claims. It also reduces evidentiary problems and promotes vigilance by claimants since claims brought too late will be dismissed.

To define the limitations period only by reference to a “reasonable” period of time fails to provide the certainty required and defeats the purpose of having a limitations period. Such a provision, once again, creates risks that cannot be readily identified or quantified and thus may prevent actors from engaging in desired activity.

The OAU version suffers from a more fundamental problem: it contains no limitations period at all. This is the case because it only identifies the time when actions may begin to be filed and does not provide any indication of any endpoint after which a claim would not be recognized.

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Analysis of the Applicability of Existing Civil Law to the Rome Scenarios

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At a workshop on liability and redress in the context of the Cartagena Protocol on Biosafety (BSP), held in Rome on 2-4 December 2002, four scenarios were presented to focus the discussion on the scope of a possible liability regime (the “Rome Scenarios,” which are verbatim reproduced in the boxes below). They involve various transboundary movements (hereinafter referred to as “TBM”) of LMOs. The Rome Scenarios do not describe whether there is any damage and, if so, what kind of damage.

The Rome Scenarios raise a multitude of issues. This paper does not provide an exhaustive discussion of all issues, but concentrates on the most common problems and major issues. For purposes of the analysis below, it is assumed that each of the Rome scenarios, in fact, results in some sort of damage (i.e. damage as to which a victim may have a claim for compensation); whether the possible types of damage fall within the scope of the BSP is discussed in the final paragraph of this section. Note, however, that none of these scenarios necessarily results in any damage; in fact, based on current knowledge, the potential for any damage is virtually non-existent, except where virulent and pathogenic micro-organisms destined for contained use are not handled in accordance with the applicable regulatory restrictions (note: the same concerns exist for non-LMO virulent and pathogenic micro-organisms).

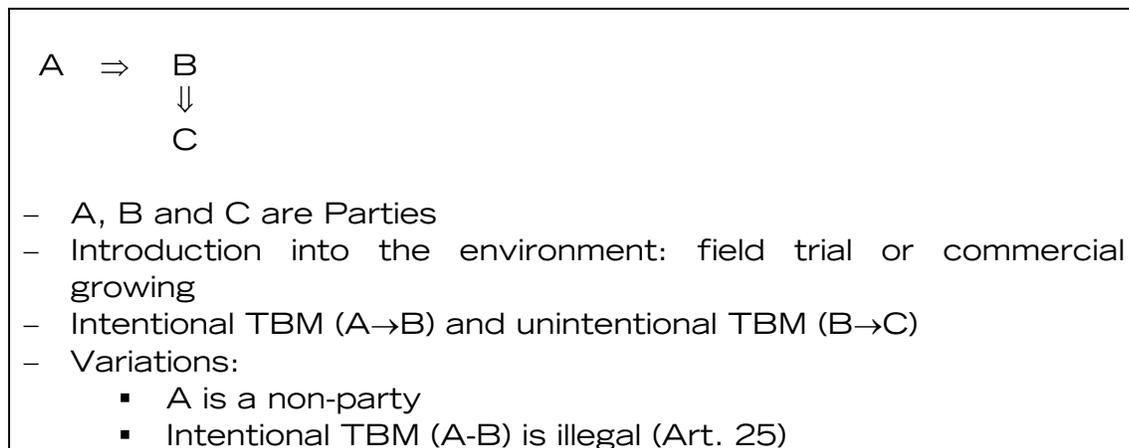
The Rome Scenarios involve the following hypothetical situations:

- Scenario 1 GMO Crops: LMOs are moved from one country to another but unintentionally enter a third country.
- Scenario 2 Laboratory Test of Virus: An accidental release occurs during a planned TBM resulting in an unintentional release in a third country.
- Scenario 3 LMOs-FFP That Enter the Food Chain: LMOs for food, feed or processing are intentionally shipped from one country to another and enter the food chain in the country of import.
- Scenario 4 Shipment through Transit Country: LMOs destined for another country are accidentally released in a country of transit.

Each of these scenarios is discussed in turn below. Both possible civil liability and state liability are analyzed.

I. GMO Crops

This scenario is described the Rome workshop materials as follows:



In this case, there is an intentional TBM of LMOs from County A to Country B for purposes of introduction into the environment (field trial or commercial growing), which results in an unintentional TBM of LMOs to a third country, C. A, B, and C are Parties, with a variation where A is a non-Party. Another variation involves an illegal TBM from A to B (Article 25 BSP) that results in unintentional TBM of LMO to Country C. Thus, this scenario actually involves three different scenarios.

Analysis:

Scenario 1 raises a number of issues, as a result of the variations. The basic problem in Scenario 1 would appear to be that a GMO crop unintentionally ends up in Country C. This scenario might be thought to create a risk of environmental damage (e.g. through displacement of other species or gene transfer).

First, the TBM to and subsequent use in Country B would not appear to raise any issues; the introduction into the environment proceeds as planned. Country B can be said to have accepted the TBM and use of the LMO in its jurisdiction and any risks that may be associated with it.¹ However, even where the regulations are observed, both civil and state liability may be invoked. Under legal regimes that do not recognize regulatory compliance as a defense (which is commonly the case), operators² are exposed to liability where, despite compliance with applicable regulatory requirements, they failed to meet their duty of care under the circumstances.³ Of course, where jurisdictions permit a regulatory compliance defense, operators that have met all relevant applicable regulatory requirements would not be exposed to liability. (Note that there are good policy reasons supporting the regulatory compliance defense.) In addition, if Country A failed to meet its “due diligence” or “good governance” obligation,⁴ it may be liable too for any ensuing damage in other countries.⁵ Of course, in most cases where a state adopts a good regulatory regime and complies with its obligations under the BSP, it has met its due diligence requirement.

¹ The BSP, of course, allows a state to accept such risks, although one could argue that approval of a TBM of a LMO does not necessarily imply acceptance of each and every risk.

² The term “operators” refers loosely to persons operating or controlling the relevant activity that may cause damage.

³ The relevant duty of care in this case is to ensure that acts comply with applicable regulatory requirements. Conversely, a violation of applicable regulatory requirements constitutes fault or negligence *per se*.

⁴ The “due diligence” requirement (“obligation de vigilance”) is part of international public law. It is viewed as an element of a state’s primary obligation towards the environment. Birnie and Boyle, for instance, state that: “Treaty formulations overwhelmingly favour the due diligence interpretation of states’ primary environmental obligations, and (...) the most convincing interpretation of the state responsibility precedents is that in most cases this standard now reflects customary law.” Birnie P, Boyle AE. *International Law & The Environment*. Oxford: Clarendon Press, 1992, p. 94. In essence, the due diligence requirement imposes a duty of care,⁴ⁱ as that term is used in civil liability law. Smith BD. *State Responsibility and the Marine Environment, The Rules of Decision*. Oxford: Oxford University Press, 1988, p. 63.⁴ⁱ States are required, for instance, to take all necessary steps to prevent substantial cross-border pollution and to demonstrate the kind of conduct expected of “good government” mindful of its international obligations. Shaw MN. *International Law. Fourth Edition*. Cambridge: Cambridge University Press, 1997, p. 594.

⁵ This would also be so if Country A is not a party to the CBD and BSP.

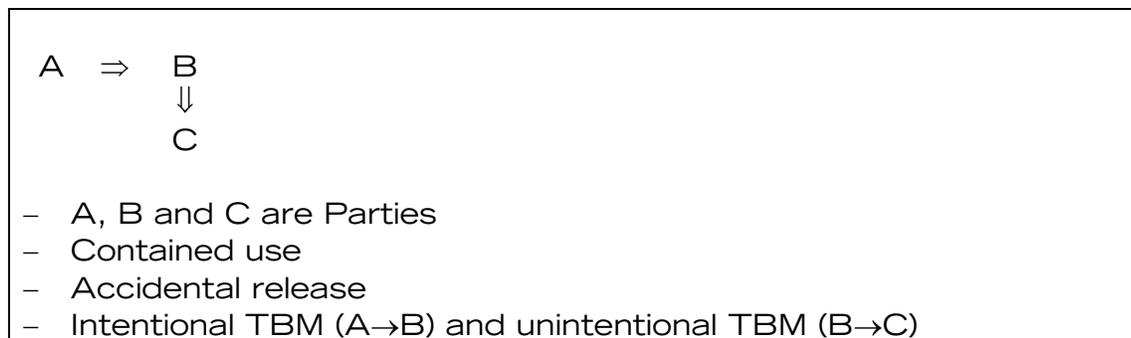
Second, in one of the variations, however, the TBM is illegal. In that case, Country B did not consent to the TBM and did not assume any risks that may be associated with the TBM and subsequent use of the LMO. Under general fault-based civil liability regimes, where operators violate regulatory requirements, such violations will be often be regarded as *negligence per se*¹ and operators will be liable for damage caused by such acts. In addition, if the illegal TBM is due to Country A failing to meet its obligations under the BSP, or its general “due diligence” obligation, Country A would be liable vis-à-vis Country B for the damages caused by its failure. Thus, there is potentially both civil and state liability involved in this scenario.

Third, as to the unintentional TBM from Country B to Country C, two situations should be distinguished. The first situation is where neither the operator nor Country B breached any applicable obligation or duty of care imposed on it. In this situation, Country C would not have claims against the operator or Country B under general principles of civil and state liability. Whether individuals who suffered damage in Country C would have any claims would depend on the national law of Country C. If, for instance, Country C has adopted some strict liability statute that covers the kind of activity and damage at issue, those individuals may be able to recover their damage. A different situation exists where the responsible person or Country B breached an obligation applying to it or a duty of care. Under these circumstances, persons suffering damage in Country C and Country C would have claims against the responsible person or Country B under common principles of fault liability.

To conclude, in Scenario 1, depending on the specific details, claims for damages may well lie against the responsible person and/or the state.

II. Laboratory Test of Virus

This scenario is described in the Rome materials as follows:



¹ The “negligence per se” rule basically provides that an operator that violated applicable regulatory requirements is deemed to have acted negligently.

In Scenario 2, a virus (which also qualifies as an LMO) is shipped from Country A to Country B for contained use. However, there is an accidental release and an unintentional TBM from Country B to Country C. Countries A, B, and C are Parties.

ANALYSIS:

An accidental release normally involves breach of applicable regulatory requirements (i.e. an unlawful act, in some jurisdictions referred to as a wrong) or breach of the general duty of care (i.e. negligence or fault). There is in any event an unlawful act if the shipment was not properly authorized under the BSP and applicable national law. The accidental release could give rise to damage (e.g. damage resulting from disease) in Country B or Country C. This scenario might be thought to create a risk of personal health damage (e.g. if the modified virus causes disease in humans).

If individuals in Country B suffer damage, the operator (in this case, probably the person in control of the virus when it was released, i.e. the laboratory operator) is likely exposed to liability if the operator failed to meet his statutory or other obligations. If Country B's government failed to meet its obligations (e.g. it failed to exercise reasonable care in inspecting the laboratory's facilities), it may well be exposed to liability too under national government liability law. If all parties involved met their obligations (which makes an accidental release extremely unlikely), damages may still be recoverable if there is an applicable regional or national strict liability statute.

If individuals in Country C suffer damage, they would basically be in the same position as individuals in Country B. Thus, if Country B's government was at fault, Country C's citizens or Country C itself would have claims against Country B. Some additional issues may arise that are typical for cross-border litigation, such as issues of applicable law and jurisdiction of the courts of Countries B and C. International private law addresses such issues.

III. LMOs-FFP that Enter Food Chain

This scenario is described in the Rome materials as follows:

A ⇒ B

- A and B are Parties
- Intentional TBM (A→B)

In the third scenario, LMOs are shipped from Country A to Country B for direct use as food, feed or for processing. Like Scenario 2, this scenario may be perceived as creating a risk of human health damage (e.g. if the LMO food causes allergies) in Country B.

ANALYSIS:

An important difference with the previous scenario is that this scenario does not necessarily likely involve non-compliance with statutory or regulatory requirements or a general duty of care. Nevertheless, such breaches may also play a role here. For instance, the chance that an LMO food causes allergies is a function of the care with which the genetic modification is researched, designed, and executed; careful and effective regulation may also contribute to this process. Thus, where health problems occur, there is a greater chance that the care levels of the developers and producers fall below the levels required by law. Where this is so, any resulting damage is recoverable under general liability concepts.

In addition, under product liability laws, LMO foods that cause allergies may well be deemed defective, e.g. if they do not meet the safety the consumer may expect. This may be so, for instance, where the genetic modification is not made according to design, or no adequate warning is provided.

It also possible that one of the states involved may be liable under international state responsibility principles or regional or national liability law. If, for instance, Country B did not take adequate measures to control the risks (e.g. it failed to issue warnings although it was required to do so under applicable laws), it may be exposed to claims for damages. Much would depend on the specific facts.

IV. Shipment through Transit Country

This scenario is described in the Rome materials as follows:



In the fourth scenario, there is an accidental release of a LMO while it is passing through a transit country (T) in connection with a TBM from Country A to Country B for contained use or introduction into the environment. Following the accidental release, there is an unintentional movement from the transit country to Country C. Countries A, B, C, and T are Parties.

ANALYSIS:

The analysis set forth above in respect of Scenarios 1 and 2 apply also here. The fact that the unintentional release took place while the LMO was in transit does not change the basic analysis. Both responsible private parties and states may be exposed to liability under these circumstances.

V. Conclusions

The Rome Scenarios raise some general issues that invite a rebuttal.

First, although the scenarios do not identify any damage, to some they might be thought to create risks of all possible types of damages, including property damage, personal injury, harm to economic interests, environmental harm, and biodiversity damage. Even if that were, in theory, possible, all damages other than biodiversity damage fall outside the scope of the BSP process.¹ After all, the scope of any BSP liability and redress regime cannot be broader than the BSP itself. Thus, even if the concerns were legitimate,

¹ Article 4 BSP, which defines the Protocol's scope, states that the BSP applies to "the transboundary movement, transit, handling, and use of all living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risk to human health." This language is somewhat ambiguous, but the best reading is that secondary health effects resulting from biodiversity damage are to be considered, e.g. in connection with risk assessment. However, that does not necessarily imply that a possible liability and redress regime, which is referenced in Article 27 BSP, should extend to health effects. Given the BSP's objective, i.e. protecting biodiversity, any possible liability and redress regime should also be focused on biodiversity protection. Cf. IUNC Guide to the Cartagena Protocol, p. 33, fn. 170. There would in no event be grounds for the creation of a separate cause of action for personal injury where there is no biodiversity damage.

harms other than biodiversity damage are not to be considered in connection with the BSP process. Indeed, states around the world have been reluctant to recognize economic damage absent physical injury,¹ and initiatives in respect of environmental damage are still evolving. Bringing these types of damage within the scope of a possible BSP liability and redress regime would not only be inconsistent with the BSP's scope, but also lead to unequal treatment and discrimination, as the same damage would be recoverable or not recoverable, depending on its specific cause. More precisely, if a person suffers physical injury due to a TBM of a LMO, he would have a right to claim damages, while a person suffering exactly the same injury due to a TBM of a non-modified organism (e.g., a foreign species), would have no cause of action.

Second, all Rome Scenarios involve LMOs, none involve common threats to biodiversity damage arising from foreign species. However, there is an on-going CBD process that focuses on liability and redress for biodiversity damage irrespective of its cause. For a number of reasons, including particularly the protection of biodiversity, a general environmental liability and redress regime should be preferred over one that covers only biodiversity damage caused by transboundary movement of LMOs. A regime specific to transboundary movements of LMOs would not only fail to cover biodiversity damage arising from other causes, but would also create discrepancies in the treatment of possible biodiversity damage arising from LMOs: if biodiversity damage is caused by a transboundary movement of LMOs it would be covered by the regime, but if it is caused by LMOs not in transboundary movement, the damage would not be covered.²

Third, the Rome Scenarios can be analyzed usefully only if additional facts are presented and regional and national liability regimes are included in the analysis. As discussed in another paper in this volume,³ regional and national liability laws already cover most of the damage that may be perceived to be associated with LMOs. For instance, damage caused by negligent, wrongful or unlawful movement, handling, or use of LMOs is normally covered under

¹ This kind of harm is sometimes referred "pure economic loss." See Banakas EK (editor). *Civil Liability for Pure Economic Loss*. London: Kluwer Law International, 1997. Dunné JM van. *Liability for Pure Economic Loss: Rule or Exception? A Comparatist's View at the Civil Law - Common Law Split on Compensation of Non-Physical Damage in Tort Law*. 4 *European Review of Private Law* 1999.

² There is discussion about the question whether the BSP limits compensable damage to damage caused by transboundary movement only. The relevant provision of BSP, however, refers explicitly to transboundary movement; the issue is to what extent indirect or consequential damage resulting from a transboundary movement may be brought within the scope of any possible BSP liability and redress regime.

³ See related article, L. Bergkamp "Liability and Redress: Existing Legal Solutions for Traditional Damage."

general, fault or other liability laws. If persons did not comply with applicable relevant statutory or regulatory requirements that is often deemed negligence per se or a wrongful act. Violations of obligations under the CBD or BSP will invariably trigger liability where such violations increased the chance of biodiversity harm. Further, damages caused by LMOs that constitute defective goods are covered by product liability laws, which often impose strict liability. Damages caused by activities involving LMOs that constitute dangerous or ultra-hazardous activities, assuming such activities could be identified, may well be covered by specific strict liability regimes.

Finally, the assumption that there is a potential gap in the existing liability and redress regimes, namely biodiversity damage, requires further analysis. Of course, if existing regimes do not cover biodiversity damage, they can not contribute to the CBD's and BSP's objectives of protecting biodiversity. Indeed, the concept of damage under civil liability law has traditionally not covered damage to *res nullius* or *res communes*, which constitute important elements of the environment. However, that is changing rapidly and this "gap" is rapidly closing. International and regional liability regimes increasingly cover environmental damage. National liability regimes, as discussed in another paper in this volume,¹ have found ways to provide for compensation for environmental damage. These evolutions include liability statutes, novel interpretation of existing rules by courts, and applications of Constitutional or administrative law in a manner that effectively creates civil liability (see, e.g., the Philippine Supreme Court's interpretation of the constitutional right to a healthy environment). Note also that the importance of liability for biodiversity protection should not be exaggerated. There is a strong case for an objective fault or wrong-based liability regime, which creates optimal incentives for prevention and, in some form or another, is part of the civil liability regimes of many nations. But beyond that, liability does not contribute to prevention.² And since biodiversity damage is often irreversible and irreparable, prevention is key. This explains also why the CBD and BSP are aimed at prevention of biodiversity damage and are relying on *ex ante* regulatory regimes to pursue that objective.

¹ See related article, L. van der Meer "General Environmental Liability: Approaches and Best Practices."

² This is so because under both fault and strict liability an operator exercises exactly the same level of care, i.e. he takes the same preventive measures, namely only those that are cost-effective. The operator does not take preventive measures that are not cost-effective, i.e. measures the cost of which exceeds the cost of the damage they avoid; strict liability does not change that calculus. Thus, strict liability does not result in more prevention than fault liability.

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